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ABSTRACT

The four issues of the "Rural Special Education Quarterly" for 1985 contain 17 major articles with the following titles and authors: "The Challenges in Providing Appropriate Educational Services to Rural Visually Impaired Children and Their Families" (K. Huebner); "Rural Orientation and Mobility: A Preview" (J. Tucker); "Organizations Serving the Visually Impaired in the U.S.: A Practical Resource List " (W. Erickson and B. Jacinto); "Alaska's Consultant Model for Visually Impaired Students" (J. Brodie); "A Systematic Process for Developing Special Services Cooperatives in Rural School Districts" (L. Widvey et al.); "Establishing an Empirically Determined National Rural Education Research Agenda" (D. Helge); "Problems Facing the Indian Handicapped Child in Rural Settings: A Case for Indian Advocacy" (U. Steucher); "Variables Influencing Special Education Teacher Employment in Rural Areas" (B. Ludlow); "Keys to the World: Microcomputer Use in Telecommunications" (R. Gall); "Rural Electronic Bulletin Boards and Computer Networks" (K. Bull and L. Marrs); "Technologies to Solve Rural Special Education Problems" (D. Helge); "Computer Assisted Rural Projects, 1983-1985" (B. Bowen); "Provision of Special Education Services to Rural Children and Youth with Disabilities: The OSERS Perspective" (M. Will); "Rural Special Education Programs: Parents' Opinions and Involvement" (T. Lombardi); "Factors in the Development of Rural Transition Programs" (J. Beam); "Training Teachers of the Visually Handicapped in Highly Rural States: Low Availability--High Priority" (S. Parsons); "Inventory for Client and Agency Planning" (R. Weatherman et al.). (DB)

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Rural Special Education Quarterly

SPECIAL ISSUE: SERVING RURAL STUDENTS WITH VISUAL IMPAIRMENTS

Volume 6, Number 1
Spring 1985

This issue of RSEQ is for all persons interested in the educational rights of blind and visually impaired students and their families. Some of the unique learning needs of these children are explained and information about particular programs is presented. Strategies are suggested and resources described. This issue is a demonstration that low incidence does not mean low interest. It is an affirmation of commitment by the field of blindness to students residing in the rural areas of our vast nation.

Kathleen M. Huebner

EC190285

The **Rural Special Education Quarterly** has been published since the Fall of 1979 as the **National Rural Project (NRP) Newsletter.** The **Quarterly** is now produced by the National Rural Development Institute and will continue to feature up-to-date information on issues regarding services to disabled individuals in rural America. The subscription price is $15.00 per year (four quarterly issues).

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THE CHALLENGES IN PROVIDING APPROPRIATE EDUCATIONAL SERVICES TO RURAL VISUALLY IMPAIRED CHILDREN AND THEIR FAMILIES

by
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Children with visual impairments are a very heterogeneous group who are widely dispersed and fall within the realm of low incidence/prevalence. These three factors alone create difficulties in providing blind and visually impaired children with the most appropriate educational services in the least restrictive environments as mandated by federal law. Providing services unique to visually impaired children and their families is further complicated when they reside in rural areas. In fact, Helge (1984) stated in a study on serving rural children that students with low incidence handicaps were the most difficult population to serve.

Unique Educational Needs

Children who are visually impaired have unique educational needs which demand assessment, instruction, and educational program coordination by appropriately trained and certified personnel--namely, teachers of the blind and visually impaired. Some of these unique educational needs include, but are not limited to: early intervention; concept development; listening; study and research skills; alternative methods for reading, writing and mathematical computation; sensory training; daily living; socialization and recreation skills; human sexuality; career/vocational training; utilization of low vision; accessibility to technology, orientation and mobility; and meaningful transition programs. Although many of the above-mentioned curricular areas may sound familiar and typical of most exceptional children's educational programs, **how** they are taught and **how** they are learned and applied by visually impaired children is unique due to the effects of visual impairment. This is true of multi-handicapped visually impaired children as well.

The lack of sight, the ability to perceive through the use of the eyes, changes the way children learn, understand, and relate to the world in which they live. Before planning educational programs for visually impaired children, many factors must be considered. Some are directly related to the impairment, such as age of onset and degree of remaining vision.

These two factors will make a difference in how children conceptualize the environment and how learning takes place. For example, sighted individuals may try to simulate the experience of blindness by wearing a blindfold and indeed may experience frustration and fear due to a lack of knowledge as to how to perform certain routine activities such as cutting meat, applying make-up, writing out a check, or walking around the block. Simulation experiences may provide some insight into feelings which adventitiously blinded persons may experience and may give the individual an opportunity to apply non-visual skills; but there is no way for a sighted person to experience how congenitally blind persons conceptualize the world in which they live. How blind and visually impaired individuals access environmental information in order to function in a visual society is very different from the way sighted persons do this.

Because of limited or no vision, students need to learn through a multi-sensory approach. Many concepts which are generally learned through visual observation must be directly taught. The utilization of any remaining vision should be encouraged and specific learning activities developed in order to stimulate students' visual capabilities and efficiency. In addition, visually impaired children may require specialized materials and equipment to make information accessible. For instance, large print or braille books; tactile maps; travel and low vision aids; abacus; tape recording equipment; speech output devices such as calculators; electronic devices for braille writing, retrieving and word processing; and speech synthesizers attached to personal computers are just **some** examples.

A lack of or limited vision can result in difficulties in developing academic, social, emotional, spatial, and career concepts if appropriate and effective intervention is not applied. It is not simply a matter of providing special materials and devices. Nor is it sufficient to base instructional programs on well intended intuition. Blind children do not have the visual referents which assist in learning through observation. As a result, direct learning experiences must be provided for conceptualization to take place. Without a solid understanding of the concept in question, transference and application will not occur. Visually impaired children require consistency in terminology, techniques, strategies, and language. This makes continual communication among parents, family, teachers, support personnel, and significant others vital to learning and development. For example, it may confuse a blind or visually impaired child if terms such as toilet, john, toidy, potty, and bathroom are used interchangeably. All family members should use the same terminology, preferably the actual term for the item, until the child is able to understand the explanation that multiple terms can be used for the same item.

Teachers who work with visually impaired youngsters must be knowledgeable of the concepts and skills the children need or how they are best taught and learned. They also need to serve as consultants to the other significant adults in students' lives. They need to work with family members, school psychologists, elementary/secondary and special subject teachers, and administrators who may know little about the impact of a vision loss on learning. They must consult effectively and function as advocates for their students.

The areas which require the immediate attention of those interested in improving educational services to blind and visually impaired children and their families who reside in rural communities are not unlike those which impede the delivery of appropriate programs to all exceptional children who fall into the low incidence category. Some specific areas of concern, however, have been identified by the American Foundation for the Blind's (AFB) Advisory Committee on the Early Years and the National Association of State Vision Consultants. The Advisory Committee is comprised of leaders in the field of education for the visually impaired. It represents parents, consumers, residential and day school programs, instructional material centers, agencies, national organizations in special education, and personnel preparation programs.

These areas of concern fall into three major categories: 1) needs assessment, 2) service delivery, and 3) personnel recruitment and retention. Although these areas are discussed separately, it should be understood that they are interconnected and often interdependent. These problem areas have been identified by those with expertise in rural education as they apply to special education as well. How these problems affect visually impaired children will be described here.

Needs Assessment

In a statistical brief by Kirchner (1983), it was stated there is suspicion "that many more visually handicapped children are eligible for special education and related services and, infact, receive services than we can detect from the federal statistics." (pp. 219-220). It is further shown that the prevalence of visual impairment, handicaps, and disability indicated in federal reports can only be used to indicate a range of estimates. The trend to shift from a categorical to a generic approach serves to compound the issue. Through presently available counting systems, it is not possible to tease out the number of visually impaired children residing in rural communities who are eligible and are or are not receiving special educational services. However, even without what is considered to be comprehensive data, we know through communications with state level administrators, local education agency staff, and parents that there are children who are receiving both appropriate and inappropriate services; and there are those who are not receiving any special educational services specific to their visual impairment.

In order to develop efficient and effective service delivery

systems, we must obtain trustworthy nationwide demographic information about visually impaired children. The demographics must include age, gender, grade level, etiology, age of onset, degree of visual impairment, ethnic culture, geographic location, and accessibility.

Early identification programs must be improved and extended to reach the most isolated areas of our nation. Multihandicapped children must be evaluated to determine the presence and extent of visual loss. Thorough comprehensive psychosocial, educational, medical, and vision assessments by qualified personnel must be completed on each visually impaired child before the most appropriate instructional program can be developed and placement determined.

Service Delivery

There are numerous components to any service delivery system regardless of the specific model which may be implemented. Assessment, instructional programs, materials, and related support services are such components. Service delivery involves the entire community -- legislators, school boards, administrators, teachers, support personnel, employers, social service workers, and, of course, the children and their families. Adequate funding sources are crucial to the ability to provide services and a full continuum of program options. At present the field of blindness utilizes several service delivery models in urban and suburban areas. The continuum of services presently utilized includes home-based services, residential schools for the blind and visually impaired children, self-contained classrooms, resource rooms, itinerant services, and the teacher consultant model. Any of these placements may be the most appropriate as well as the least educationally restrictive environment for visually impaired students. If only one or two visually impaired students reside in a particular school district, a full array of options is generally unavailable. School district boundaries, county lines, and, in some cases, state lines must be traversed in order to collaborate and provide the best possible and most cost effective services to the students.

It is totally unacceptable to place children in inappropriate settings or programs. Visually impaired children should never be placed in special education resource rooms designed for cognitively delayed, emotionally disturbed, and/or learning disabled students, unless, of course, the child has been identified as also having such an additional handicapping condition. Such a practice can have negative academic, social, emotional, vocational, psychological and economic effects on both the students and their families. The time has come for us to carefully evaluate existing service delivery systems and develop creative alternatives. Rather than attempt to fit children into existing systems, we must develop systems that meet children's needs.

The itinerant service delivery model frequently does not provide sufficient time for teachers to present all program components needed by their students. This may be somewhat resolved by itinerant teachers increasing their role as consultants to students' teachers and parents, but not to the exclusion of providing direct service to students. Although teacher-preparation programs may profess to stress consultation in their courses, few offer systematic preservice or inservice curricula to develop effective consultant skills. This needs to change. Certainly, Marrs' (1983) ten major leadership skills for rural special education administrators and supervisors should be incorporated into graduate vision programs. These skills are: interpersonal and negotiation skills, creativeness, logical abilities, self-confidence, assertiveness, practice planning, communication, organization development, and self-renewing abilities.

Another partial solution may be for education agencies and programs to work more cooperatively with each other and with rehabilitation agencies. In some rural and suburban parts of the country, itinerant and rehabilitation teachers are working together with students. The vision teacher provides instruction in academic areas and the rehabilitation teacher provides instruction in activities of daily living skills and career/vocational guidance. Orientation and mobility services are offered in some instances through the education agency and in others through the rehabilitation agency. Efforts are coordinated and provided in a cooperative spirit.

Summer programs offered through collaborative efforts among local education agencies, residential schools, and rehabilitation agencies have been successful. They provide remedial, recreational, and unique programs such as technology workshops, assertiveness training, work study, and curricula designed for gifted visually impaired students. Last year the two major national organizations in the field of blindness, one with an emphasis in education and the other on rehabilitation, joined together and became the Association for Education and Rehabilitation of the Blind and Visually Impaired. State, regional, national conferences, and publications provide the members with opportunities to gain insight into each other's activities but, more importantly, into the needs of blind and visually impaired infants, children and adults.

Personnel Recruitment and Retention

Special education personnel recruitment and retention in rural areas is a national problem (Helge 1980, 1981, 1984; Helge & Marrs 1982). The approximate number of 18-year-olds in the United States in 1979 was 4.2 million, today it is 3.5 million, and in 1995 it will be 3.2 million (Fiske, 1984). The pool of potential teachers from which we have to draw is decreasing significantly due to a decline in population. Further, special education must compete with today's and tomorrow's in-

creased employment opportunities and vocations which are more lucrative. Yet according to the American Foundation for the Blind (AFB), it is predicted that there will be a 19% increase in visually impaired children from birth to five years of age and a 12% overall increase by 1990 (Uslan, 1983).

The AFB Recruitment Task Force has identified several concerns regarding the national shortage of teachers of visually impaired children. These include:

- the number of qualified personnel entering preparation programs has declined while the number of individuals needing services has increased;
- changing models in service delivery and an increase in multi-handicapped visually impaired children have resulted in a need to expand the knowledge base and career options of teachers;
- teachers of visually impaired children must often assume multiple roles; e.g., in addition to being teachers of visually impaired children, they must also have expertise in early childhood development, orientation and mobility or severely handicapped, particularly in rural areas;
- personnel preparation programs are, for the most part, geared to providing programs for full-time students only and are campus bound -- more flexibility is imperative;
- the number and type of career opportunities for women who have traditionally comprised a major part of the professions have increased;
- a shift in values from altruism to pragmatism and a lowering status for human service professionals without a concomitant increase in security and financial awards has occurred;
- federal support for personnel preparation has decreased substantially while operating costs have increased significantly.

New approaches to recruit, train, and retain professionals must become a priority for professional preparation programs in the field of blindness and visual impairment. Alternative teacher preparation models have been initiated and are being applied at Texas Tech University and the University of South Carolina. Some courses are offered off campus and through cable television; thus potential teachers living beyond commuting distance have the opportunity to complete the coursework needed for certification. With rapid changes in technology, the increased need for early intervention programs and the rising multi-handicapped visually impaired population, the need for inservice training programs for practicing teachers, supervisors and administrators is critical, yet funding and support for continuing education programs has abated.

Elementary/secondary teachers, and other professionals serving visually impaired children in rural areas need to learn about the impact of blindness, and the resulting unique educational and experiential needs of such students from vision teachers. Specialists in the field of blindness and visual impairments have much to learn about teaching in rural communities. They need to acknowledge cultural nuances and develop sensitivity to ethnic and religious beliefs practiced in rural communities. There is a mutual need. The spirit of cooperation and the common goal of providing the most appropriate education for students must be pervasive action and not just an esoteric theory.

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RURAL ORIENTATION AND MOBILITY: A PREVIEW

by
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Rural Challenges

Rural environments may be perceived as simple, complex, spiritually nourishing, or very threatening depending upon the individual and the situation. With fewer traditional landmarks and clues, and a unique and sometimes subtle level of activity, the rural environment is obviously much different from the more structured urban environment.

Many rural inhabitants live on farms or in homes nestled in the wilderness miles from a town or village centers. Here the terrain may be especially rough and may make locomotion very difficult for the blind traveler, especially for the person who has poor balance or is new to the area. When walking on a dirt road or path, one may encounter holes, exposed tree roots, fallen trees, ruts, or ditches not to mention the hazard of low-hanging branches.

In one respect the natural environment offers a certain lure of simplicity and constancy that can sometimes provide a form of pleasant escape and solitude; but the wilderness can also provide a different experience each time a person enters it. This is especially evident with the seasonal changes that may cause washouts which change the contour of the terrain and dry up the stream's auditory contribution during summer heat. The muddy season of spring thaw and the severity of winter can drastically alter or cover landmarks necessary for the blind traveler's orientation. Persistent wind, which shifts direction frequently, can carry with it many sound waves and olfactory clues that would traditionally contribute to the blind traveler's orientation.

The rural environment lacks the architectural uniformity, sidewalks and curbs, traffic flow and controls, curbside objects, and building lines that usually aid the urban blind traveler. Therefore, the landmarks and clues used for orientation in the rural setting must be patiently extracted from the environment since they may not be commonly recognizable to the client and the Orientation and Mobility (O&M) Instructor. It is often very difficult in the rural setting to identify landmarks because of the probability of previously mentioned environmental changes and the complete absence of landmarks in specific locations. If clues are present, they may not be conveniently placed or accessible. A clue could simply be a slope, a noticeable path, a storm drain, distinctive bumps or low areas in a road, the sound of a nearby stream, or an odiferous manure patch. Often it becomes necessary to implement artificial clues which are purely open to the imaginations of the blind traveler and mobility teacher. One could place a car or trash barrel out by the side of the road, tie the family dog or goat up out in the yard, place a radio in the mailbox, or even tie a perfume-drenched handkerchief to a fence or tree. Other possible clues could be large rocks which are conveniently placed, the mailbox, leaving the television or radio on as a sound source, windchimes, a fence, or a newly-planted bush.

When there is a lack of clues, the tactual mode of sensory information cannot be over-emphasized. Cane techniques such as "two-point touch," "touch and drag," and the use of guidelines become the main tools for walking and gathering information in rural areas. Mobility, therefore, becomes a search for any clues that may be available; sometimes there are none and travel becomes primarily aided by tactual information and proprioceptive time/distance judgment.

We've talked briefly about the weather and its capacity to radically change some features in the rural environment; about the rough terrain and inconsistencies and examples of clues that characterize rural environment. This brings me to the major theme of this paper -- intimacy: intimacy between the environment and its human inhabitants.

Rural dwellers are usually in their communities by choice and often have a very strong love and understanding of their surroundings. They respect their environment, rejoice in it, work in it, and have some very individualized impressions of their areas. It should be our basic function as teachers to attempt to understand these impressions and experiences, expand upon them, and help organize them into ordered space or coherent patterns. Of course this order must be developed around the client's immediate needs; but can this order be applied to the overall rural environment? Do environmental succession and order in the general country setting really exist?

Various accounts of the perceptions of relationships and clusters of information have been documented by anthropologists and other scientists discussing the abilities of Eskimos and other Native Americans, and animals to move through the environment by the constant processing of information when visualization was not possible. Most of us remain oblivious to these various environmental distinctions because we don't need them. Can this way of thinking someday be applied to visually impaired individuals in the rural setting?

For many, there is often an unexplained, but pleasant, sense of rightness to one's familiar surroundings, and it is this sense that can contribute to the well-being and balance of the visually impaired rural inhabitant. Often this familiarity is an extension of a family history dating back several generations. If the individual is new to the area, or has difficulty in conceptualizing the surroundings, I might suggest the use of a topographical type of tactual map, forming a realistic image of the environment.

For the rural inhabitant, the outdoors plays a large part in life. Most work and recreational activities take place outdoors. With a visual impairment it is often difficult to fully participate in these activities. A visually impaired person can become depressed and the opportunities for emotional and physical release are sometimes difficult to find. Alternate employment opportunities are long distances away and require special training and education that may not have been necessary in an isolated rural community. There may also be little desire or willingness to relocate from the homestead that has housed the same family for generations. In what type of situation does this leave the visually impaired individual? Is a complete O&M program realistic? What can we teach in O&M when the person has no place to go and activity must be structured around work for the maintenance of family and home? Finally, to what extent should we expect independent O&M?

Many rural towns are stable communities where people often live in one house, or in one town for a very long time. Therefore, citizens know the town, their neighbors, and their daily activities very well. The need for O&M services is evident, for without it independent travel may be limited to one's immediate area, with sighted guide travel being used for other areas. In the rural community there is generally a strong neighborly support system that provides companionship and security. There is little willingness to relinquish these comforts for independent travel beyond the community. Knowledge of sighted guide training then becomes important for relatives and neighbors. Such rural folks have been figuring out their own ways of doing things throughout their lives, and it is this ingenuity that should provide the catalyst for successful rural O&M.

Role of the Mobility Instructor

Just what is the role of the mobility teacher in a rural setting? There are no traffic lights, no blocks or curbs and few traditional landmarks and clues. The blind traveler must then rely on non-traditional cues that will aid in travel to a specific destination. Sensory training and orientation skills become key issues.

It is also very important to consider and establish an understanding of the individual's lifestyle and show him/her possible activities. This may often be necessary for survival of the rural inhabitant, and O&M becomes a "life program." Often the instruction will be structured around work activities such as farm chores, splitting and gathering firewood, loading and unloading, and planting crops. Mobility instructors must be especially understanding, creative, and motivating in their approach.

As one rural O&M instructor stated, "You must spend a lot of additional time with the people because in many cases, you are their only contact with the state or the bureaucracy which can rule their lives -- food stamps, welfare, social security, the bank, etc. It is a wonderful experience, but it can easily lead to burnout or over-involvement. The resulting dependency of the client on the instructor is difficult to break down."

Another instructor had her own perceptions of rural O&M by saying, "Mobility is often less of an issue than many of the tasks taught by rehabilitation teachers. Home activities are more important since mobility presents major logistical problems that are solved by other methods." She also adds, "Mobility techniques boil down to route travel and any adaptive technique that suits the area and the client. The client usually knows the immediate territory very well and rarely travels beyond it without assistance. The cane allows protection from major obstacles but is mainly used to find specific landmarks."

It is the general consensus that rural O&M is route-specific and almost entirely tactual. I agree, but I also contend that this is only a small representation of our potential as teachers. What about visually impaired youngsters? Do they not have the right to understand their natural surroundings, and experience the joys of surpassing oneself, of freedom, and respectful wonderment? As teachers we must work to learn about the natural environment so that we can distinguish, explain, and vivify it for our students -- thus becoming natural enrichment teachers.

A blind mountain climber, Colette Richard, in her book, **Climbing Blind,** wrote, "There is no point in taking a blind person into the wilderness without telling him what is going on. You know that your friend is blind and so does he . . . You have to work together to make him as little blind as possible."

Much of what has been written in this article implies that most existing programs and services for the visually impaired are located in towns and large urban centers. The availability of services in rural areas is limited and the O&M specialist often becomes familiar with many of the needs of the rural inhabitant. Responsibilities can include home management, rehabilitation teaching, mobility, and counseling. Providing education about eye care, establishing a mobile low vision clinic, promoting community awareness and working with a very diverse population are some other responsibilities that the teacher or specialist may face. The O&M instructor has a

special body of knowledge and is often the only professional involved in work with the visually impaired in rural areas.

"Experience Is the Best Teacher"

I put on my occluders (blindfold), grabbed a long cane and a friend and headed for a suitable rural environment. Perhaps the most noticeable impression that I received was one of fatigue. Proper cane technique, which contributed much to this feeling, and soon proper technique gave way to modification. Grasping the cane with all fingers wrapped around the grip, rather than extending the forefinger, seemed more effective and comfortable. Wrist movement seemed to be less effective and more fatiguing than a lateral arm swing in a sweeping motion.

While following a road or a trail independently, or in tandem with a sighted guide, I found the experience very exhilarating. Perhaps too much emphasis has traditionally been placed on the visual pleasure of nature's colors, forms, and movements.

Many will argue that words cannot describe or communicate nature's song. However, an understanding guide not only helped me to form a mental image, but also added to my feeling of security. I allowed my imagination to surpass the visual reality of the environment as it was described to me. Rather than simply travel from one point to another, I found that I wanted to become involved with my surroundings.

Patience on the guide's part can be very beneficial to the blind traveler. Continuous reinforcement and repetition were the keys in establishing confidence in route-specific travel. A venture off the planned course can be helpful in order to set up a comparison to the desired route. Disorientation can be alarming if there are no clues with which to re-orient.

I have one final suggestion: Go out with a blindfold or low vision simulators and experience the rural environment for yourselves. You will begin to understand your own feelings and perceptions. Such an experience can provide insight into the feasibility of proposed adaptations. More importantly, you will have a better understanding of the problems that a visually impaired person might encounter.

ORGANIZATIONS SERVING THE VISUALLY IMPAIRED IN THE U.S.: A PRACTICAL RESOURCE LIST

by
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American Council for the Blind
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An affililation of individual members and 68 occupational/special interest and state organizations of persons concerned with the improvement of the total community for blind people and for the promotion of effective participation in all aspects of society. Provides information and referral; legal assistance and legislative training; consumer advocate support; assistance in technological research; speaker referral service; consultative and advisory services to individuals, organizations and agencies; and program development assistance. Provides for a free exchange of ideas, opinions and information through **The Braille Forum**, a free monthly publication available in braille, large print, disc and cassette. Offers monthly program to radio information services and provides the latest legislative information via the "Washington Connection," a toll-free telephone service operated during non-working hours at 1-800-424-8666.

American Foundation for the Blind
15 West 16th Street
New York, NY 10011
(212) 620-2000
AFB maintains the world's major library on blindness together with a full range of electronic adaptations, and is initiating a technology evaluation center in its New York office. Regional offices in New York, Chicago, Washington, D.C., Atlanta, Dallas and San Francisco can put you in touch with AFB consultants in a range of special interest areas -- from education to employment, early childhood to aging, low vision to recreation -- for specialist advice and training. Books, public information pamphlets, and a monthly research and practice journal, the **Journal of Visual Impairment & Blindness**, are described in AFB's annual Publications Catalog, free upon request. AFB also offers a storehouse of aids and applications for children, educators and adults from watches to calculators, writing instruments to sporting equipment.

American Printing House for the Blind
1839 Frankfort Avenue
Louisville, KY 40206
(502) 895-2405
A national organization for the production of literature and the manufacture of educational aids for the visually handicapped. Since 1879, through the Federal Act "to Promote the Education of the Blind," the Printing House has received an annual appropriation from Congress to provide textbooks and education aids for all students attending schools and/or special education institutions of less than college level. Through funds donated by the public, the Printing House publishes braille and talking book editions of the **Reader's Digest** and a weekly talking book edition of **Newsweek** magazine. It also publishes braille books, music, and magazines; large-type textbooks; talking books and magazines.

National Federation of the Blind
1800 Johnson Street
Baltimore, MD 21230
(301) 659-9314
A national membership organization of blind persons with affiliates in all states and the District of Columbia. Works to improve social and economic conditions of blind persons. Provides evaluation of present programs and assistance in establishing new ones, such as grants and scholarships for blind persons. Publishes **The Braille Monitor**. Has public education programs including a speakers bureau. It also has a Parents of Blind Children Division which publishes a bimonthly magazine, **Future Reflections**, and also sponsors state and regional parent meetings.

The National Association for Parents of
The Visually Impaired, Inc. (NAPVI)
P.O. Box 180806
Austin, Texas 78718
(512) 459-6651
A non-profit organization of, by, and for parents committed to providing support to parents of children who have visual impairments. Promotes and provides information through workshops and publications. Publications include the following: a quarterly newsletter, **"Awareness," Your Child's Information Journal; Take Charge: A Guide to Resources for Parents of the Visually Impaired;** and **How to Pack 'Em In: A Guide to Planning Workshops.** NAPVI promotes the development of state and local organizations of, by, and for parents of visually impaired children. Members receive the quarterly newsletter, legislative alerts, information-sharing opportunities, referral to needed services, contact with other parents and a collective voice. There are several affiliate parent groups which sponsor local and regional parent meetings. Dues are nominal.

National Library Services for the Blind
and Physically Handicapped
1291 Taylor Street, NW
Washington, D.C. 20542
(202) 287-5100
A national program to bring free reading materials of a general nature -- classics, current fiction, and nonfiction -- to the nation's blind and physically handicapped citizens who cannot utilize ordinary printed materials because of physical impairments. Reading materials provided consist of talking books recorded on cassette tape or 33, 16 and 8 RPM microgroove discs, books in braille, and braille music. Provides talking book machines for disc records and cassette tapes. Selects, orders, and distributes materials through a network of 160 nationwide libraries, which function as circulating centers, using the mail to serve readers. Materials mailed postage free. Provides reference information services on all aspects of blindness and other physical handicaps that affect reading. Conducts national correspondence courses to train sighted persons as braille transcribers and blind persons as braille proofreaders. With volunteer help, transcribes books into hand-copied braille, records books on magnetic tape, and repairs talking book machines.

Recording for the Blind, Inc.
20 Roszel Road
Princeton, New Jersey 08540
(609) 452-0606
Lends taped educational textbooks at no charge to visually, perceptually and physically handicapped students of all levels, and to professionals in all fields. Recording is done in 28 studios across the country by over 5,000 trained volunteers at specific requests of borrowers. Master tapes of completely recorded books are kept in the organization's library, which currently contains 60,000 titles; 4,000 added every year. Cassette copies available to eligible borrowers.

SpecialNet
National Association of State Directors
of Special Education
2021 K St., N.W., Suite 315
Washington, D.C. 20006
(202) 296-1800
SpecialNet is the largest education-oriented computer-based communication network in the United States. It is designed to provide up-to-the-minute information and instant communication for persons concerned with educational services and programs. Includes electronic bulletin boards, electronic mail, and data collection and information management. A special **Vision Board** has been established for visually impaired persons and those who serve them. To access the **Vision Board** on SpecialNet, type CHE VISION at the command prompt in SpecialNet.

PROBLEM-SOLVING STRATEGIES

Although we strongly advocate individualized problem-solving, strategies our research identifies as potentially generic are described in this quarterly newsletter. Listed in the left hand column are a number of identified needs. In the right hand column, you will find potential strategies which may provide solutions to meet those needs and school personnel presently using the identified strategies.

NEEDS	STRATEGIES
Methods of mainstreaming low vision students in rural areas	Lockwood School has found some effective methods for serving a low vision student. The student is in the sixth grade, and continues to be totally mainstreamed with assistance from a teacher aide for three hours per day. The school also receives periodic consultative services from the Montana School for the Deaf and Blind, which provides the school with enlarged print textbooks each year. The aide is responsible for materials adaptation where necessary, and also typing instruction and tutorial assistance. A closed circuit television system has also been used to enlarge regular print books. As facilitators plan for the student to enter junior high, they are reviewing the design of his services. They are currently encouraging the development of his ability to use hand-held magnifying devices and extending his typing skills to an enlarged print word processing program on the computer. At the junior high, the student's equipment will be located in the resource room where he can utilize it during study time. In addition, the building copy machine is being upgraded to one with enlarging capabilities, making it easier to provide readable worksheets, study guides, etc., on a short notice basis. Service providers realize that it is critical to have an advocate to facilitate the day-to-day adaptation needs that arise; now they must develop this student's ability to do that for himself. For more information, contact: Pat McNeive, Eastern Yellowstone County Special Education Cooperative, Lockwood School, 1932 Highway 97E, Route 2, Billings, MT 59101; (406) 259-0154.
Visual impairment consultation/training: Guidelines for regular classroom teachers	Ideally, the classroom teacher should have access to a trained teacher of the blind for consultation and technical assistance. If you do not, consider the following tactics: • Be bold and aggressive in addressing specific questions to the child's ophthalmologist and physician. For example, what is the eye condition? Is any treatment recommended? If so, specifically what kind? What is the estimated acuity and field of vision? What does this mean for the classroom and for safe and confident movement within the environment? What is the prognosis? What, if any, precautions are necessary? • Establish a correspondence system with the American Foundation for the Blind and with a residential school for the blind. Request information on the eye condition, methods/materials and techniques, resources for parents, and special activities for which your student may be eligible. • Submit requests to your administrator to attend regional conferences on the blind and/or to observe programs for the blind in a public school and a residential school. • Meet with your administrator regularly to share your concerns and needs as they relate to educating your visually handicapped student. For more information, contact: Mary T. Morse, Director, MICE, New Hampshire Division of Public Health, Hazen Drive, Concord, NH 03301. Reprinted from an article written by Mary T. Morse, Pennsylvania Resources and Information Center for Special Education, **PRISE Reporter,** No. 16, March, 1985.

Visual impairment resources: Guidelines for administrators

As an administrator, you may be faced with limited funds, no available vision personnel, classroom teachers who feel ill-prepared to teach the visually handicapped, and parents who are demanding services which just are not available. A few strategies to consider are as follows:

- Survey local education agencies within a 100-mile radius regarding their needs in serving visually handicapped children. Is there a sufficient visually handicapped population for which a coalition of communities might attract a qualified vision teacher? Are there fringe benefits that might be developed to make an attractive offer? Such benefits might include a small, mobile van outfitted for working with the visually handicapped child; frequent opportunities to revitalize knowledge and gain peer support via visits to a residential school for the blind or attendance at conferences; and assistance in finding housing as well as job opportunities for a spouse.

- Establish a cooperative relationship with a residential school for the blind in order to provide on-site training of classroom teachers, peer support for a vision teacher, utilization of materials resources, and consultation and technical assistance. Inquire if the residential school has retreat learning periods which your students might attend to learn specific skills, such as braille and optacon.

- Investigate private organizations for the blind in your state to ascertain if personnel can be sub-contracted to provide components of the necessary specialized services. Request funding assistance from your state education department.

- Inquire about the feasibility of utilizing student interns from a college of optometry (for low vision assessments) and from a university graduate program which trains teachers of the visually handicapped. You may discover an intern who would like to become a more permanent member of your community.

- A short-term, high expense tactic that can result in a long-term solution is to fund the vision training of a teacher who intends to remain in your community. This approach eliminates the common problem of retaining a staff person who discovers that rural life is not for him or her.

- Lastly, heavily utilize the resources and materials listed in this issue of the quarterly.

For more information, contact: Mary T. Morse, Director, MICE, New Hampshire Division of Public Health, Hazen Drive, Concord, NH 03301.

Reprinted from an article written by Mary T. Morse, Pennsylvania Resources and Information Center for Special Education, **PRISE Reporter,** No. 16, March, 1985.

Recorded voice-indexed taping devices

Voice indexing of tapes (providing headings in spoken words that will sound natural when the tape is run at fast forward) is a useful way for a student to study selectively within cassettes. Several techniques for voice indexing have been developed, but a practical one uses inexpensive equipment that is readily available and easy to operate. Many cassette recorders sold by the American Printing House for the Blind with Model No. 3-5193A are suitable, as well as those with Model No. 3-5194A sold after approximately April 1, 1982. Model No. 3-5194A sold earlier may be modified. To determine if an American Printing House for the Blind machine will record at **fast forward,** try to press the **record** button and the **fast forward** button simultaneously. While holding the buttons down, say a few words; then **rewind** a short distance and play that portion of the tape at **fast forward.** The words you said should be heard in a natural voice. Many two-track cassette recorders that have **"Cue-and-Review"** can also be used as well as some Radio Shack and other popular recorders. Before buying a recorder, test it to see if it will record when you press **record, play** and **fast forward** at the same time. For more information, contact: James Chandler, Voice Indexing for the Blind, 9116 St. Andrews Place, College Park, MD 20740; (301) 935-5772.

ALASKA'S CONSULTANT MODEL FOR VISUALLY IMPAIRED STUDENTS

by
Jane Brodie
Alaska Resources for the
Moderately/Severely Impaired
2211 Arca Drive
Anchorage, Alaska 99508
(907) 279-9675

Educating visually impaired children in the state of Alaska is a challenge. The state stretches over 586,500 square miles which is an area one-fifth the size of the continental United States. Within that space live approximately 450,000 people, mostly in the urban areas of Anchorage, Fairbanks, and Juneau. The remainder of the population is distributed across small towns and villages long distances from any organized population centers. Great distances separate people from services and information; few roads and severe weather contribute to the isolation. While Alaska's climate and geographical features are dramatically different from those of other states, the problems associated with rural, remote, and sparsely populated areas are much the same as those of many other parts of the United States.

Until 1977 visually impaired students in Alaska were served by itinerant programs in Anchorage or Fairbanks, were sent out of state, or received no services. The State of Alaska's Department of Education recognized the inequity of the educational situation brought about by the size and nature of the geographical regions and the diverse and scattered population. The department also recognized that many of these problems could not be solved by conventional means for the following reasons: it is not cost effective for a district to hire a teacher of the visually impaired for one or two children; many villages do not have adequate housing should a teacher be hired; the geographical space between districts makes sharing a teacher uneconomical and prohibitive; teacher turnover is generally high in the rural and remote areas, making continuity for students' programming difficult; and the small number of visually impaired students makes a residential school for the visually impaired impractical.

The department initiated the development of a consultant program to deliver services statewide to "unserved and underserved" visually impaired students. This program is part of the Low-Incidence Handicapped Outreach Program funded by a state grant to the Alaska Resources for the Moderately/Severly Impaired (ARMS). Services or technical assistance from this program operate on the following premises:

- all handicapped individuals have the right to a free appropriate education in the least restrictive environment;
- the local education agency has the primary responsibility for the education of all of its handicapped students;
- the family is a most influential factor in the growth, development and education of handicapped children and should be actively involved in that child's life and education;
- persons with disabilities must be assured of appropriate services by trained specialists in the processes of assessment and program planning, implementation, and evaluation;
- the local district personnel and families can provide quality education with technical assistance from trained specialists.

Within the Low Incidence Handicapped Outreach Program there are four education specialists for visually impaired. It is required that these specialists be dually trained and certified by the state of Alaska in education for visually impaired **and** in orientation and mobility. Additional training in multi-handicapped blind is preferred. During the 1984-85 school year, services to fifty-three students in twenty-one different school districts were provided. The specialists schedule their own travel based on the Technical Assistance Agreements (TAAs) that they prepare for their caseload. They work closely with the local district special education director, building principal, teachers and aides. Through these contacts, specialists avoid district vacations, district or building inservice activities, and are kept advised of times when the teacher or child may be away from the village. Each education specialist will travel and be on site approximately fifty percent of their work time during the year. Generally this is about two weeks per month. Our experience in Alaska shows that more travel and on-site time results in staff becoming either non-effective or soon leaving the program. Since the education specialist for visually impaired from ARMSI often becomes the stable education specialist in the student's program, the agency and the department of education see the importance in maintaining quality staff.

One of the keys to the success of this consultant model is that the technical assistance is tailored to fit the needs of the student and the local staff. The amount of time spent on site and the types of service can vary from intense on-site, monthly three to five day assistance visits which include direct instruction of the student as well as training of the local personnel, to less intense assistance with visits during the school year to inservice the local staff and monitor progress between visits.

All referrals must be signed by the local district special education director since the primary responsibility for the education of that child rests with that district. Upon receipt of a referral, the assigned education specialist contacts that special education director and then the appropriate school personnel (principal, teacher(s), and aides) and parents gather additional information about the student and the initial needs of the district staff and parents. Initial on-site activities may

include assessing or assisting in the assessment of the student's functional vision, the unique curriculum areas and compensatory skills for visually impaired; providing recommendations for the student's Individual Education Plan (IEP), and identifying the district personnel who will carry out the goals and objectives. The latter personnel can vary from a regular classroom teacher, to a resource room special education teacher with training in learning disabilities or mental retardation, or to a teacher aide generally with no formal training in education or special education.

At this time, the expected technical assistance from the ARMSI specialist is agreed upon by the local personnel, building principal, and special education director. A formal Technical Assistance Agreement (TAA) is written and signed by the district special education director and the ARMSI director. The TAA details the objectives of the assistance and outlines the activities to take place for each objective including the timeline and the agency and district people involved.

The types of services and assistance that can be provided throughout the year are:

- **Formal educational assessment** usually done on an annual basis to ascertain the student's strengths and weaknesses and to develop recommendations for the annual IEP.

- **On-going recommendations to and inservicing of the local staff** about the teaching techniques needed for that student and about the specific technical skills being taught to the child. Recommendations might include information on the environmental setting, the use of a reader, tape recordings, large print, tactual aids and general instructional techniques and specific lessons for teaching a skill such as basic concepts, typing, daily living skills, etc. This activity also involves on-going evaluation of student progress during the on-site work and monitoring of that progress between visits. The latter is generally done by telephone.

- **Modeling and training of local personnel** on how to teach a specific skill to the child is specified on the TAA. This could include specific training in braille, the abacus, or how to monitor a skill taught to the child by the education specialist during the visit.

- **Direct instruction to the student.** This instruction is very specific and (a) requires a high level of expertise, or (b) involves liability, or (c) requires such a short amount of instructional time that it is more efficient to teach the student directly rather than through the local staff. This can involve orientation and mobility or the use of low vision aids. The local personnel are trained in continuation and monitoring of these skills between visits.

- **Procurement of special materials and equipment.** While the district is expected to purchase the major materials and equipment the student needs, ARMSI **does** maintain a library of large print and braille textbooks, special equipment, professional books, and curriculum materials available for loan. Some of the more expensive equipment is available on a trial basis so that its usefulness for and by the student can be determined before it is recommended that the local district purchase it for the student.

- **Parent liaison and training.** Work is done directly with the parents as agreed upon by the local district staff in order to provide information relative to the needs of their child or to provide assistance in helping them continue their child's educational program into the home setting.

In addition, the education specialist may provide services which do not necessarily have a direct instructional effect on the student; i.e., assisting in identifying and being a liaison with eye specialists, assisting the school or parent in working with other agencies and disseminating information about the students with visual impairments and their educational needs.

As might be expected, many of the students have additional handicaps. In these cases, the education specialist works as a team with the staff serving other disabilities covered by the Low Incidence Handicapped Outreach Program. This assists the local district in developing a team approach in meeting all the needs of a student.

After each on-site visit a Student Service Report is prepared and sent to the district personnel worked with, the special education director and to the parents to advise or remind them of recommendations and techniques developed during the visit or to advise them of follow-up information. The report also includes a "Do Next Visit" section to assist in the preparation of the next on-site visit. In addition, each ARMSI confidential student file also contains a Contact Log detailing all contact whether on-site or by mail or telephone. This provides a picture to future staff as well as assisting in the annual compliance review by the State Department of Education.

In order to avoid the "consultant trap" of being perceived as drifting from site to site and providing no **real** assistance, the following procedures are advocated to contribute to the effectiveness of this model.

- Consistency of staff, as discussed above.

- Frequent contact both on-site and by telephone and mail monitoring.

- Determining of both student and local staff needs and willingness for service and beginning at that level, rather than where ARMSI staff feel they should be.

- The joint development of the TAA involving the local teachers and the special education director.

- Including time for the student and/or the local staff to be freed from regular duties during the on-site visit and have this written into and agreed upon in the TAA.

• Including **both** the building principal and the special education director in arrangements.

• Arranging for university credit for specific training and inservicing of the local staff such as for instruction in braille.

• Recruiting staff that have both excellent technical skills in educating visually impaired and in orientation and mobility, but who also have a high degree of 'people' and interpersonal skills.

It must also be pointed out that while this Consultant Model is highly successful with the majority of Alaskan visually impaired students living in rural and remote areas, it is recognized that it does not meet the needs of **all** the students. Some of the problems that exist include the lack of visually impaired peers and adult role models for the students, the lack of support for the family, and the dependency on the local staff skills and dedication to carrying out the skills between on-site visits.

One of the ways we have addressed this problem is by having a summer program for those students. The goals include concept development by a variety of experiences; developing skills in orientation and mobility, daily living skills, and compensatory areas; familiarization with an urban setting and transportation and contact with other visually impaired peers and adults.

Additionally, local districts are encouraged and assisted in hiring their own teacher for visually impaired if the services needed by the local students warrant a full-time teacher. If remaining in a local district simply is not appropriate, out-of-district transfers are recommended. Presently we are working with the State Department of Education to address those cases where the consultant model is not appropriate.

Our experience and evaluation data indicate that this model is meeting the needs of the majority of students served. Graduating and obtaining jobs or attending colleges, youngsters are making appropriate progress. Local district teachers and administrators and the State Department of Education are very supportive of this model and the services provided.

In conjunction with the program serving school-age students (ages 3-21 years), a consultant program serving visually impaired infants and their families on a statewide basis also exists. It uses a home-based approach and is funded by the State Department of Health and Social Services. Three infant educators for visually impaired served over one hundred infants this past year.

Within the agency, the education specialists serving school-age visually impaired and the infant educators function as a team to provide an integrated program to visually impaired children across the state. While each staff person works individually with a student, they function as a program team, meeting at least monthly with a program supervisor to discuss issues concerning the program and agency. They also work on program projects such as the development of computer accessibility information and equipment, and share information and student service concerns. This has meant that visually impaired children are identified early and transition from local home programs to school district programs is smoothly facilitated.

For additional information about the Infant Learning Program and/or about the school age services described above, please contact Jane Brodie at ARMSI.

RESOURCES AND EXEMPLARY PROGRAMS

FILM DEPICTS CHALLENGES OF A VISUALLY IMPAIRED TEACHER

"A Blind Teacher in a Public School" is a movie which shows how one blind teacher carries out daily responsibilities as a full-time teacher of seventh grade English. For more information, contact: International Film Bureau, Inc., 332 South Michigan Avenue, Chicago, IL 60604; (312) 427-4545.

100 GAMES PROMOTE LEARNING

A special package of over 100 games is available to visually impaired children. The games can be used in the mainstreamed classroom, self-contained classroom, or at home. These field-tested games promote social skills and incorporate learning in all cognitive areas. Send $6.50 to: Love Publishing, "Educational Games for Visually Handicapped Children," 1777 South Bellaire Street, Denver, CO 80222.

FINANCIAL AID/SCHOLARSHIPS AVAILABLE FOR COLLEGE STUDENTS WITH VISUAL IMPAIRMENTS

Information concerning financial aid and scholarships for visually impaired students is available. An article entitled "Where the Money is for Visually Impaired College Students: Financial Aid Information for Higher Education" printed in the June, 1984, issue of the **Journal of Visual Impairment and Blindness** relates this pertinent information. The author, Robin L. Tannenbaum, is a specialist at M.C. Miguel Memorial Library of the American Foundation for the Blind. The article summarizes financial aid programs available from national blindness agencies, state vocational rehabilitation agencies, and the federal government. Application procedures and contact addresses are listed in the article. For more information, see the June, 1984 issue of the **Journal of Visual Impairment and Blindness** or contact the American Foundation for the Blind, 15 West 16th Street, New York, NY 10011.

MICE Project Provides System for Visually Handicapped

The Multidisciplinary Interagency Core Evaluation Project (MICE) was developed to facilitate the effective delivery of services to visually handicapped infants and children in rural communities in the state of New Hampshire. The Project provides a cost-effective linkage of existing service agencies at all levels to deliver comprehensive coordinated services to widely scattered rural populations. Although each community faces unique problems and may find it difficult to meet all the needs of individual families, a cooperative arrangement allows a number of agencies to contribute for the provision of services.

Begun in 1974, MICE has become an interagency coordinating council as well as a direct service system to families and to community agencies. Areas of service include case finding, infant evaluations, child and family program planning and implementation, and case coordination. Eight agencies appoint staff to participate in the team effort. The Director, Mary T. Morse, is responsible for insuring that the team's recommendations for preventative, promotional and treatment services are realistic and based on the best information possible.

The effectiveness of the MICE Project is demonstrated by the following findings, based on twelve years of experience:

- It is feasible to develop a systematic process of identifying blind and visually handicapped infants.
- Implementation of service is more effective when based on knowledge of normal child development and family functioning.
- Health, education, and other rehabilitative personnel must function as a single unit.
- Interagency outreach can provide service to a small population of children and families.
- Cross-sectional data on children and families can be used in fiscal and program planning.

For more information, contact: Mary T. Morse, Director, MICE, New Hampshire Division of Public Health, Hazen Drive, Concord, NH 03301.

Reprinted from: Pennsylvania Resources and Information Center for Special Education, **PRISE Reporter,** No. 16, March, 1985.

LANGUAGE GUIDE AIDS PARENTS OF BLIND CHILDREN

"Talk to Me: A Language Guide for Parents of Blind Children," by Linda Kekelis and Nancy Chernus-Mansfield is a language guide designed to help parents understand the special needs of blind children and to suggest ways that families can have fun together while promoting the child's language development. It is available free of charge. For a copy of "Talk to Me," contact: The Blind Childrens' Center, 4120 Marathon Street, P.O. Box 29159, Los Angeles, CA 90029-0159.

REACH OUT AND TEACH

(a way to be there when you can't be there...)

Reach Out and Teach, a new set of materials from the American Foundation for the Blind, may help teachers in rural areas work with families of infant and preschool visually handicapped and multiply handicapped children. **Reach Out and Teach** was developed over a three-year period with federal funds from the U.S. Department of Education. In addition, all materials were field-tested over a two-year period in workshop and correspondence formats.

Reach Out and Teach consists of a **Parent Handbook,** a **Reachbook,** eight slide presentations, and a **Teacher's Manual.** The set was designed to be used: a) in conjunction with a teacher's early education services; b) by parents on their own, without the help of a professional, or; c) by parents enrolled in a correspondence program with the Hadley School for the Blind. For teachers in rural areas, **Reach Out and Teach** can help provide consistent parent training and early education services when actual contact is limited to bi-weekly, monthly, or less frequent home or centered-based visits.

The philosophy behind **Reach Out and Teach** includes these basic assumptions:

- Parents are the single most important resource that children have.
- All visually and multiply handicapped children can learn, regardless of the degree of their impairment.
- Children have the greatest chance of learning during the preschool years.
- Parents know their children best, and have both the ability and the right to make educational decisions for their children -- at least until the children are able to make them for themselves.

Other features of **Reach Out and Teach** include:

- Information to help parents experience the world from their children's point of view.
- Charts to keep track of motor progress and toilet training.
- Suggestions for teaching dressing, eating, and toileting that can be removed from the **Reachbook** and posted in the bedroom, kitchen, and bathroom.
- Bibliographies and suggestions for additional reading for both parents and teachers.

For futher information about **Reach Out and Teach**, contact: Dr. Kay Alicyn Ferrell, Publications Department, American Foundation for the Blind, 15 West 16th Street, New York, NY 10011; (212) 620-2000.

OOPS!

Please note an inadvertent error on the part of the editorial staff on page 10, paragraph 2 of our Winter, 1985 issue. The text states that an acceptable ratio is "1:20,000." It should read "1:2,000." Our apologies for any misunderstandings.

RURAL TEACHER PREPARATION AND INSERVICE CONFERENCE

The First Annual National Rural Teacher Education Conference will be held October 9-11, 1985, in Bellingham, Washington. The conference is co-sponsored by the National Rural Development Institute of Western Washington University, the American Association of Colleges for Teacher Education (AACTE), the American Association of State Colleges and Universities (AASCU), and Phi Delta Kappa. The conference will feature panel discussions and media presentations on effective teacher training models for rural districts. Also under discussion will be a research agenda for rural teacher education and issues in teacher preparation and recruitment for rural districts serving Hispanic, Black, and Native American students. For more information, contact: The National Rural Development Institute, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

SIXTH ANNUAL NATIONAL RURAL SPECIAL EDUCATION CONFERENCE

The American Council on Rural Special Education (ACRES) will hold its Sixth Annual National Rural Special Education Conference in Tucson, Arizona, March 18-21, 1986. In keeping with the conference theme, over 150 presentors will offer practical, down-to-earth programming suggestions to the rural service providers, administrators, teachers, and parents attending the conference. Each presentor will be affiliated with effective programs or preservice training designed to enhance services for rural individuals with disabilities.

Highlighting the "Early Bird Sessions" on March 18 will be intensive training/awareness sessions focusing on major conference strands. The topics to be explored in depth include:

- Use of Advanced Technologies
- Rural Preservice Training
- Independent Living Strategies
- Music and Art as Tools for Teachers
- Adolescent Suicide Prevention
- Transition Programs
- Services for Low-Incidence Handicaps.

The three-day General Conference will begin March 19 with a keynote address by a representative of the Assistant Secretary of the U.S. Office of Special Education and Rehabilitative Services, Washington, D.C. Conference sessions will focus on demonstrations of successful approaches in rural special education and will include workshop and demonstration formats. In addition, working sessions of the National Rural Task Forces will take place. Groups of rural service providers and parents from across the nation will engage in problem-solving efforts addressing major rural service delivery problems. Also scheduled are working sessions of the National Consortium of Universities Preparing Rural Special Educators and the National Rural Education Research Consortium.

For further information, contact: American Council on Rural Special Education (ACRES), National Rural Development Institute, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

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Editorial policy

The *Rural Special Education Quarterly* has been published since the Fall of 1979 as the National Rural Project (NRP) Newsletter. The *Quarterly* is now produced by the National Rural Development Institute and is the only national scholarly publication solely devoted to rural special education issues. The purpose of the *Quarterly* is to provide articles concerning federal and other events relevant to rural individuals with disabilities, progressive service delivery systems, reviews of relevant conferences and publications, and sources for rural special educators.

Guidelines for submission of articles

Authors wishing to submit articles are advised to refer to the schedule below. Articles for publication should focus on identified service delivery problems, applied theory/research, or practical field tested solutions. Persons reviewing articles value practical problem-solving approaches, particularly those in which the writer can give concrete examples of viable strategies and/or locations of exemplary programs.

The editor is also pleased to receive *short vignettes* which note a resource available or an exemplary program, and a person who may be contacted for additional information.

Articles which have not been previously published, and which are not under review by other publications are welcomed. They should be limited to 10 double-spaced pages or less and should follow the format of the American Psychological Association's *Publication Manual*, 1983 edition. The receipt of each article is promptly acknowledged. A detachable cover page to facilitate blind review should include the full name(s), degree(s), and professional affiliations of the author(s), as well as a return mailing address of the principal author. The field review process takes approximately three months.

The editors reserve the right to make necessary editorial changes which do not affect the meaning of the manuscript.

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A systematic process for developing special services cooperatives in rural school districts

by
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Introduction

The recent upsurge of federal and state demands concerning quality education, as witnessed through the various reports on educational excellence, has created a dilemma for rural states with small, isolated school districts. Current action in South Dakota by the State Board of Regents of Higher Education and the State Board of Education, relative to increased requirements in mathematics, computers, foreign language, science, language arts and social studies, has magnified this problem for many of the smaller school districts in the state. The ability of such districts to provide quality general and special education services on their own is fast becoming an insurmountable task.

Problems created when small rural school districts attempt to meet the general educational needs of the students include such areas as financing, staffing, and scheduling (Veselka, 1980). These problems become even more pronounced when attempting to service the needs of the handicapped (Hensley, 1966).

Problems of small rural districts include geographic size and inadequacy of the general education offerings as well as nonexistent special education programs, unserved and unidentified handicapped children, lack of qualified staff, and uneven distribution of federal funds (Woodburn and Young, 1980). These, as well as problems in transportation (Plante, 1979), staff development (Helge, 1980), and instructional and noninstructional materals (Uxer, 1982) have led superintendents to the exploration of cooperative ventures.

South Dakota has experienced the voluntary development and operation of cooperatives, beginning in the early 1970's. During the 1985 legislative session, the legislature passed the Education Reform Bill which establishes voluntary cooperatives within the state. In a state with 77,047 square miles and 195 school districts, 70% of which have a student population of less than 500, the need for cooperatives seems especially crucial. Veselka (1980) and Klees (1980) both indicate the enormous potential for cooperatives in strengthening rural education.

A review of the literature found successful cooperative ventures in both regular and special education.

General Education Cooperatives

Amodeo, et. al. (1983) reported on the successful project between four major educational and technical institutions and schools in New Mexico. Morgan, et. al. (1975) reported on the effective use of large scale telecommunication systems to bring information to rural school districts. The Supplemental Educational Center in Bottineau, North Dakota has successfully provided programs to rural schools in the areas of administrative assistance for staff inservice, library sharing services, and the sharing of other materials (Jensen, 1973). The Texas Region XIX Educational Service Center (Uxer, 1982) has provided a variety of services including sharing of instructional media, cooperative purchasing and staff training to rural Texas schools.

Special Education Cooperatives

While general education offers unique challenges for rural educators, providing services to special needs children seems to magnify these challenges (Hensley, 1966).

Helge (1984) in a review of five studies by the National Rural Project identified benefits and problems with cooperative programs for special education. Some of the benefits included cost efficiency, retaining local autonomy, compliance, access to specialists and better teacher retention. The problems centered around bureaucratic issues such as district goal displacement, poor relationships between district and cooperative staff, supervision problems, and fiscal inequities. Many of these problems have also been reviewed by one of the current authors in cooperatives in South Dakota. However, effective cooperatives *do* exist. Lorimer (1981), and Helge (1984) reported on one example in southern Colorado. Project REACH served 136 severely handicapped children in a three-year program. The main thrust of the project was successful. A successful model for utilizing a cooperative approach to home-bound programs for handicapped preschool children was presented by Figil, et. al. (1980). This program focused on administration, intervention, parent training and staff development.

In reviewing the literature, the authors became more convinced that the possible solution to many of the general and special educational problems facing rural schools in South Dakota lies in the cooperative model. As a result of the review, the present investigators developed a model for a needs assessment/feasibility study in the establishment of Special Services Cooperatives. The remainder of this report will outline the process taken in the development and implementation of the model.

continued...

Methodology

Process

The present authors were charged with the task of designing a needs assessment model to establish the existing status and requirements of general and special education in eight small rural districts which were interested in forming an educational cooperative. Additional emphasis was to be placed upon potential expansion areas which would improve services beyond minimum requirements as established by state law.

It was, therefore, necessary to: (a) synthesize the major areas of need into workable components, (b) design a needs assessment instrument based upon these components, (c) identify a balanced sample of educators, parents and board members to respond to the instrument, and (d) analyze the responses and summarize the findings.

The original charge as outlined by the eight superintendents was:

1. How would legal status (state law), organizational, and administrative responsibilities be established?
2. How could current offerings/practices in the area of special needs students be shared and/or be enhanced?
3. How could current offerings/practices in the area of general and community education be shared and/or be enhanced?

Instrument

Based upon input from the literature, the eight superintendents, and state requirements for special and general education, a comprehensive questionnaire was designed. The major dimension's clusters included: (a) Special Education, (b) General Education, (c) Consultants and Specialists, and (d) Governance. The original instrument was designed by the investigators with input from the eight superintendents.

Respondents

In the interest of obtaining a balanced response to the instrument, respondents were selected from all areas of the school community. In all a total of 114 persons were interviewed as follows: Superintendents, 8; Board members, 7; Principals, 16; Special Education Teachers, 13; Elementary and Secondary Teachers, 58; Counselors, 8; Parents, 2; Students, 1; School Psychologist, 1.

It is important to note that the comprehensive questionnaire was not given in total to all of the respondents. A breakdown of major and specific dimensions was performed and included in four separate formats as follows: 1. Full Format: Superintendents; 2. Modified Format I: Special Education Teachers; 3. Modified Format II: Principals, Counselors, Teachers, Students and Parents; 4. Modified Format III: School Board Presidents. The four forms were color coded for ease in administration and analysis.

Discussion

The development of cooperatives is a must if small, rural school systems are to provide the essential services needed for quality education. Too many times cooperatives are established through a "seat-of-the-pants" process that leads to misunderstanding, inadequate programming, poor staffing levels and misplaced funding. The development of a cooperative needs to involve feasibility studies such as the one described above.

The process that was the focus of the study reported here seemed to provide a viable, systematic means to analyze the perceptions of all members of a school district. The results were analyzed in a manageable, succinct manner that provided the administration with a mapped out route for cooperative expansion that takes into consideration the attitudes of members of the school districts involved in the cooperative. Allowing input on the part of the administrators in the development of the instrument as well as the survey process provided a validation of the instrument that cannot be accomplished through other means.

While the results of each study will vary, the authors strongly recommend the process outlined in this report for future feasibility study of cooperatives.

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RSEQ

A preservice program designed to address the needs of rural visually impaired children

A teacher preparation program at SUNY Geneseo is designed to prepare educators to be able to plan and provide instruction and services to meet the unique educational needs of visually impaired students. Many teacher preparation programs prepare generalists. This program provides the theoretical groundwork to deal with the wide range of students who have visual impairments.

The program, although based on traditional methods, has some novel components. The program emphasizes the need for teachers in rural settings. It deals with the unique skills, competencies and problems of a rural placement. Built into the program are opportunities for students to work with visually impaired students in a variety of recreational, educational and residential activities.

The strength of the program is the cooperation with local professionals, agencies, district BOCES, and organizations serving the visually impaired in Western New York. It is through this cooperation that the students gain a wide range of practical experiences.

For more information on the SUNY Geneseo program, contact either Dawn Werner, or Ida Jean Holman, Special Education Department, Blake B 203, SUNY Geneseo, Geneseo, New York, 14454, (716) 254-5395.

Establishing an empirically determined national rural education research agenda

by
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(This article is based on a study conducted by the National Rural Education Research Consortium. It was developed specifically for a June 1985 presentation to the U.S. Department of Education Intra-agency Committee on Rural Education. The complete study is available upon request.

The Need for Quality Rural Education Research

This document reports on the first comprehensive national effort to derive an empirical data base for establishing rural education research priorities. Rural schools comprise the majority (67%) of the nation's school systems and are extremely diverse.

The dramatic diversity of rural schools and their unique needs support the imperative need for quality rural education research. This research is required if educators are to make sense of the diversity and to develop content related educational curricula and administrative procedures.

One of the most significant obstacles to thoroughly assessing the effectiveness of rural education, and to comparing rural and urban districts has been the absence of a consistently applied definition of "rural" among federal agencies, educators, and professional organizations. Urban service delivery models have historically been recommended and unsuccessfully applied to rural schools. Practices successful in one specific type of rural subculture have also been transported, without adaptation, to other rural subcultures and have failed.

Most federal agencies have had no definition or requirements for gathering data with regard to rural performance versus nonrural performance. Data on rural schools collected by the National Center for Education Statistics (NCES) have frequently been summarized with data from large school districts. Until 1983, data for districts enrolling fewer than 300 students were completely deleted. This occurred in spite of the fact that they comprised 25% of the operating public school districts in the U.S. (Williams and Warf, 1978).

Unfortunately, various data collection agencies and studies have used different definitions in studying rural school populations. A common definition has been to define a "rural" school district solely by population, as one having fewer than 1,000 students, although figures as high as 2,500 have frequently been used.

Population-based definitions of "rural" are problematic. For example, if the local education agency (LEA) being classified is large in area, it may have a higher enrollment than 1,000 or even 2,500 but still be very rural because of the sparsity of its population. However, strictly defining a rural district by population may inadvertently include nonrural areas. A population per square mile definition is more functional even though total geographic square miles may differ.

The 1980 Census defined "rural" as:

> All persons living outside urbanized areas in the open country or in communities with less than 2,500 inhabitants. It also includes those living in areas of extended cities with a population density of less than 1,000 inhabitants per square mile.

This definition contains ambiguous terminology (i.e., "outside urbanized areas in the open country") and does not offer a satisfactory context for defining a rural school district. In fact, this definition subsumes many nonrural areas.

The modified census definition below has been successfully field tested in national rural education research conducted since 1978.

> A district is considered rural when the number of inhabitants is fewer than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a standard metropoliten statistical area (SMSA), as determined by the U.S. Census Bureau, are not considered rural. (Helge, 1981)

Need for a Study to Determine a National Rural Education Research Agenda

It is clear from the above that a comprehensive data base for rural education is needed. Little data collection occurred until the late 1970's. Generalizable rural samples are difficult to obtain. Yet it is felt that rural education will best be enhanced when sound studies have been conducted ascertaining "what works" in given rural subcultures.

The increasing concern of the U.S. Department of Education about the effectiveness of rural schools prompted a search by its Intra-Agency Committee on Rural Education to expand the data base of rural education research and to identify a national rural education research agenda. This is consistent with the Department's official policy stating that rural education should begin to receive an equitable share of the information, services, assistance and funds available from and through the Department of Education and its programs (August 23, 1983 report of the U.S. Secretary of Education).

Empirical data from which to determine rural education research priorities have been nonexistent. This document reports results and implications of the first study designed to derive a data base for establishing research priorities.

Methodology of the Study

The primary objective of the study was to ascertain research priorities among rural educators, both in special and general education, in this country. The second purpose was to determine if there were differences in respondents' research priorities associated with regions of the country, types of positions held, or types of employing institutions.

The study was conducted by the National Rural Education Research Consortium. The Consortium, which is geographically representative of the United States, is composed of university faculty, regional resource personnel, and state education agency personnel interested in rural education research. It provides formal and informal linkage systems through which research needs are identified and relevant studies are facilitated.

Thirteen themes of research interest were generated from the 1978-84 work of the National Rural Project (funded by the U.S. Department of Education) and during the 1984 meetings of the Consortium. The themes varied from teacher training methodologies to addressing rural personnel attrition/shortages to local governance issues.

With these 13 themes as a framework, the questionnaire for this study was designed using the 46 research questions and issues delineated by a meeting of the Consortium in conjunction with the U.S. Department of Education-sponsored national rural education conference in June of 1984.

The 46 research questions were prioritized to identify which areas were perceived to be of greatest importance to the field of rural education. The instrument was designed to force respondents to differentiate between their degree of personal interest/research and the importance of each question to the field of rural education. Thus, each respondent rank ordered the 13 themes (from highest to lowest interest/importance), using two columns.

Respondents scored each of the 46 research questions using a five-point scale ranging from "unimportant" to "critically important." Two separate columns were designed for each respondent to note how important it is that research be conducted on each topic (by someone). The first column clearly asked for the respondent's "personal research interest," and the second column asked the "importance of research for improving rural education."

Approximately 1,500 questionnaires were mailed to potential respondents (a geographically representative mailing list of rural educators, administrators and researchers), and a total of 461 questionnaires were returned.

The 461 returned questionnaires were coded according to the position of each respondent, the place of employment (institution), federal region, and whether the person's primary training and experience had been in general or special education. Analyses were then conducted to delineate significant differences in response to these categories.

The next task involved clustering the research questions/issues so that *empirical* research themes could be determined. The cluster analysis technique differentiated "importance to the field" and "personal interest." Nine research clusters containing the 46 research questions were determined by this computer analysis.

Results of the Study

Respondents

A total of 273 of the respondents were general educators and 188 were special educators. Public schools employed 180 of the respondents, colleges and universities, 144, and other agencies (e.g., state education agency, education service unit, and research and development centers), 137.

Rankings of Clusters (Themes)

Table I below lists the nine clusters that emerged from this empirical analysis.

The means of all the questions within a cluster were gathered and a mean of these means was computed, thereby obtaining a mean score for each cluster. The clusters were then ranked according to these scores, and the subsequent discussion of the questions is based on these clusters and their rankings.

Table I also depicts, in "importance of research to the field," the top three questions related to each cluster followed by the mean ranking of each question. This abbreviated format is designed to illustrate some of the most critical rural education research questions identified. Additional studies are currently underway to determine individuals interested in investigating specific research questions related to each cluster. Groups of individuals with similar interests will be linked by the National Rural Education Research Consortium.

TABLE I

*Questions Related to Each Cluster**

Cluster I: Rural School Effectiveness (Mean: 3.78)

1. How can we best measure the effectiveness of rural schools? (4.15)
2. What makes a rural school effective? How does this differ from criteria that make nonrural schools effective? (4.06)
3. What are qualitative and quantitative measures of effective school leadership in rural America? How are these different from those of nonrural settings? (3.80)

*The three questions with the highest mean, in each cluster, are listed. Cluster VIII only lists two questions because only two were generated by respondents. The mean of each individual question is listed after the question.

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Cluster II: Governance and Finance (Mean: 3.56)

1. What impact do federal and state mandates have on rural school funding? (3.88)
2. What are the effects of various service delivery systems for special education? (3.81)
3. What are effective alternate financing systems for rural schools? (3.79)

Cluster III: Staff Training Needs; Technology as a Resource (Mean: 3.52)

1. How can rural factors such as low incidences of handicaps, transportation problems, and other elements be resolved through the use of new educational technology? (3.93)
2. What is the need for generalists to meet rural educational needs to serve a range of ages? (3.48)
3. What kinds of supervision, practicum facilities, and observation strategies are cost effective in various types of rural areas (e.g., remote areas versus small clustered towns, etc.)? (3.41)

Cluster IV: Teaching Styles and Incentives (Mean: 3.50)

1. What are effective ways of serving rural gifted students? How does one identify gifted rural students who are culturally disadvantaged? (3.80)
2. What are incentives for the development of innovative rural school programs? (3.76)
3. What are the incentives of pay for rural teachers and administrators? Should any rural pay incentives be developed (e.g., in the very smallest districts)? (3.53)

Cluster V: Field-Based Personnel Preparation (Mean: 3.39)

1. How can LEAs, regional service centers, and other organizations assist in rural practica and practica supervision? (3.53)
2. What is the cost effectiveness of using different techniques (given equivalent outcomes in rural preservice preparation)? (3.42)
3. When should videotape, laser discs, or other technologies be used in place of field-based experience in rural preservice preparation? (3.19)

Cluster VI: Preservice Preparation (ethical issues, curriculum, methods, logistics) (Mean: 3.34)

1. What technical and human skills and knowledge should be included in a rural training program? (3.82)
2. How can training programs balance the need to provide "state-of-the-art" quality role models, practicum experience, etc., with the need to expose students to the realities of rural schools? (3.59)
3. How can preservice students be prepared to work with ethnic minority, bilingual, migrant, and other populations in rural areas? (3.41)

Cluster VII: Personnel Recruitment and Retention (Mean: 3.26)

1. What are the best procedures to recruit and retain rural special education staff? Regular education staff? (3.73)
2. What kinds of procedures used by business and other non-government and government agencies (e.g., Peace Corps) for training, recruiting, and retaining personnel could be used in rural preservice preparation? (3.03)
3. What specific education roles need to be filled in distinct geographic areas? Are certain handicapping conditions more prevalent in one area than another? (3.01)

Cluster VIII: School-Community Interaction (Mean: 3.26)

1. How can we secure greater community involvement in rural school systems? (3.60)
2. For what roles should local rural citizens/teachers be recruited? What roles should be filled by outsiders? (2.93)

Cluster IX: Rural vs. Nonrural (Mean: 3.13)

1. What are impacts of local rural culture on learning and behaving? (3.67)
2. How do local school objectives and expectations differ from community and student expectations of rural areas? (3.31)
3. What non-schooling influences are significant for rural schools? (3.30)

Implications of the Study

The research agenda study has generated long and short-range goals for policy and practice at all levels. Ramifications of the study are described below.

1. Implications for the Federal Government.

The U.S. Department of Education has a legislative mandate to deliver an equitable share of the information, services, assistance, and funds available from and through the Department, to rural areas. (U.S. Secretary of Education's August 23, 1983, report.) Current services and fiscal allocations are not equitable. It is clearly the responsibility of the Federal Government to address this issue and find solutions to identified problems. Research should be supported which focuses on determining what constitutes "equity." (Because increased funding is required to operate remotely located rural programs, "equal funding" frequently does not create "equity.") Research should also be funded to determine what would create equity (e.g., research assessing alternate tax and other structures). Federal resources which should be made available include technical assistance, collaborative data gathering, and information dissemination, as well as fiscal support.

Because the field now has an empirically determined national rural education research agenda, the Federal Government should support research efforts which relate to the prioritized research clusters.

The enhancement of rural education should be an interagency responsibility with significant involvement of the Department of Education. Congress has recognized that rural education involves all disciplines and that past approaches have been fragmented. Standard categories of education (e.g., elementary vs. secondary), do not reflect the way that educational services are delivered in many rural settings. A holistic approach should be implemented, and relevant agencies such as the Departments of Agriculture, Labor, Commerce, and Transportation should be involved. Thus, it is recommended that the various offices related to rural education form a consortium or partnership to fund research and demonstration efforts that holistically address issues in rural education.

The Federal Government should routinely and efficiently collect data so that rural vs. nonrural differences in funding and educational quality may be determined. Analysis should be feasible for even very small districts (e.g., those under 300 ADA).

The Federal Government should foster collaboration between universities, public schools, and state education agencies. This should include incorporation of wording in the authority for grants and contracts that will bring about interdisciplinary studies and other cooperative efforts.

2. Implications for Relevant State Agencies.

Two-thirds of all U.S. schools are rural, and current services and fiscal allocations are not equitable. Because each state has a significant rural population, all states should have an entity charged with the task of improving rural education. Over half of the states currently have a task force or other group appointed by the state's governor. These ad hoc groups or agencies typically concentrate on problem identification and should provide legislative and other action recommendations for their state and for the Federal Government. State-level recommendations should be utilized by the appropriate Inter- and Intra-Agency Committees of the U.S. Department of Education.

3. Implications for Institutions of Higher Education.

Higher education personnel interested in rural education research should be linked with rural schools and practitioners for collaborative research projects. The research priorities established by this research agenda study should be considered when planning student theses and dissertations. Results of rural education research projects should become part of the content of university training programs.

4. Implications for Rural Schools and Students

Table I lists areas of questions which the 461 respondents defined as critical for better understanding and improving rural school performance. The conducting of research related to this rural education research agenda will culminate in a sound data base for rural school improvement.

This study clearly indicated that policy makers (e.g., superintendents and state education agency staff) and policy implementors (e.g., higher education faculty, principals and teachers) tended to agree on priorities for rural research. This indicates that there are excellent opportunities for collaboration between public schools, universities, and state education agencies. Such collaboration should be actively facilitated. Collaborative efforts are much more essential in rural areas than in nonrural areas, and it is imperative to identify the most effective ways to cooperatively deliver services. (Thus, research must be related to policy making, administration, coordination, training, etc.) Projects designed to determine effective partnerships between rural schools and established rural delivery systems (e.g., county extension agencies), rural civic organizations, and the private sector should be actively fostered. Examples of this would be joint projects to develop new combinations of interdistrict cooperative models, studies to determine how to build stronger rural school-community-private sector partnerships, and investigations of alternate uses of personnel.

Just as urban models are generally inappropriate for rural settings, there is no one rural service delivery model effective in a number of rural subcultures. Research studies should profile rural school practices that are effective in specific rural subcultures (e.g., socioeconomic, geographic population sparsity, and other bases).

Applied research projects which emphasize demonstrations of effective processes and dissemination of findings useful to rural practitioners should be prioritized.

5. Implications for Data Dissemination.

Options for data dissemination using advanced technologies should be fully explored (e.g., electronic networking). Research projects and processes that involve the use of advanced technologies for solving problems of rural education and for conducting research in isolated rural communities should be facilitated.

Current practices incorrectly assume that a rural school will ask for information/data relevant to its specific subculture. An alternate model should be proposed for information dissemination. The sharing of applied research which emphasizes findings relevant to rural practitioners should be prioritized.

Linkages between rural practitioners and researchers should be continuously encouraged in research design and implementation. The National Rural Education Research Consortium will continue to facilitate appropriate studies and link Consortium members by research skill and interest area.

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Summary

This document reported the results of the first comprehensive national effort to derive an empirical data base for establishing rural education research priorities. Implications of the study for the Federal Government, relevant state agencies, higher education institutions, rural schools and students, and data dissemination were shared.

A key strength of the entire analysis is the homogeneity of responses and research prioritizations. Although personal research interests vary, as would be expected, respondents in this study were clearly in agreement. Analysis of variance strongly indicated that rural practitioners and researchers across the country were in agreement in prioritizing the importance of the clusters of research issues to the field of rural education.

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RSEQ

National rural education research consortium

The *National Rural Education Research Consortium* is composed of collaborative teams formed to facilitate the quality and quantity of rural education research. Hundreds of rural education practitioners and researchers are members of the *Consortium*. The primary goal of the *Consortium* is to facilitate rural education research by linking members with similar interests and providing data banks of resources.

Through formal and informal linkage systems, research needs are identified and relevant studies are facilitated by the Consortium. For example, expertise data pools and other research elements are shared; data samples are bartered; literature is reviewed; and research designs are collaboratively reviewed.

To meet this goal, a *National Rural Research Data Bank* has been instituted. The data bank is housed within the National Rural Development Institute at Western Washington University. *Consortium* members may access the data bank by calling, writing or dialing an electronic bulletin board. The following eight data banks are presently available: member profile, member interest, researchers' skills, conference attendance, geographic subject pool, needs requests, literature synthesis and funding source(s).

General bulletin boards on rural education, mail bulletins and periodic booklets containing data bank files will be available soon.

For more information, please write to: *The National Rural Education Research Consortium*, Miller Hall 359, Western Washington University, Bellingham, WA 98225, (206) 676-3576.

National showcase for excellence award received

The National Rural Development Institute of Western Washington University has been selected as one of seventeen winners of the 1985 National Showcase for Excellence Awards Program. The awards program is hosted by the American Association of State Colleges and Universities (AASCU).

The National Rural Development Institute's innovative preservice training program for rural educators was one of two winners in the category designated, "Discovering New Ways of Training Teachers to Deal with Disadvantaged Youth." The preservice program consists of ten validated rural preservice training curriculum modules and *The National Rural Education Preservice Consortium*. This *Consortium* consists of almost 200 universities across the United States engaged in the development, field testing, and validation of exemplary rural education preservice training modules and materials.

For further information, contact: Doris Helge, Ph.D., Director, National Rural Development Institute, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

PROBLEM-SOLVING STRATEGIES

Although we strongly advocate individualized problem-solving, strategies that our research identifies as potentially generic are described in this Quarterly. Listed in the left hand column are a number of identified needs. In the right hand column, you will find potential strategies which may provide solutions to meet those needs and school personnel presently using the identified strategies.

Needs	Strategies
Child count data for research and funding in special education	*Child Count Data Software*, priced at approximately $70.00, is now available from Mobius Corporation, 405 N. Henry Street, Alexandria, VA 22314, (703) 684-2911. This software, designed for IBM microcomputers, contains federal child count data from all states and territories, by age, law and exceptionality area. The software is well worth considering for anyone involved with research, report writing, etc.
Appropriate toys for developmentally delayed children	Organize to gain the sponsorship of a group of parents, teachers, local businesses or area residents for the collection of toys. The School of Education at Western Washington University has begun a similar committee called Educational Toys for Tots. Contact: Hunter Nickell, School of Education/ Alumni Association, Miller Hall 357, Western Washington University, Bellingham, WA 98225; (206) 676-3393.
Heightening parents' awareness of the services available to them	Show them a copy of the *ACRES Rural Parent Resource Directory*. Inspire them to join the ACRES Rural Family-Professional Partnerships Task Force, or at least to complete the last page of the Directory. This adds their name, address, needs, strategies and local resources to the Directory. Networking of this kind is demanding much respect lately as an effective rural strategy which meets both immediate and long term needs. It requires participation. For more information contact: Phebe Schwartz, Miller Hall 359, Western Washington University, Bellingham, WA 98225 (206) 676-3576.
Work possibilities for mentally handicapped adults in rural areas	The University of Oregon has a mobile crew model designed for small communities and rural areas. A company implementing the model may have a number of crews, each with five individuals with a moderate or severe mental handicap, a supervisor, and one-quarter time assistant supervisor who provide training and support to the workers. Crews operate out of a van, which reduces the costs and segregration of a separate facility. There are presently two model sites operating, with funding by county/community mental health services. Referrals are received through county case management and local agencies. Workers perform service operations such as grounds maintenance and custodial work, and earn from $80 to $150 per month. For more information contact: Michael Collins, Specialized Training Program, 135 Education Building, University of Oregon, Eugene, OR 97403; (503) 686-5311.
Handicapped Purchasing Program	IBM's Handicapped Purchasing Program offers rebuilt, used typewriters at a low price to individuals who have a letter from their physician indicating that they are handicapped and would receive therapeutic benefit from a typewriter. Call your local IBM business office or write to: Dave Kelley, IBM, Santa Monica Blvd., Suite 2100, Los Angeles, CA 90067.

Problems facing the Indian handicapped child in rural settings: a case for Indian advocacy

by
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The self concept of children is largely determined by their social environment. Apart from the family, the school is probably the most significant socialization agent during childhood. Formal and informal learning as well as relationships with peers and adults will inevitably become part of the child's self concept. Hopefully, positive experiences will be sufficiently frequent and consistent to make school a place where the child feels secure and rewarded. But the handicapped child is typically in need of special support and requires in many instances prolonged attention and sophisticated rehabilitation methods. When one considers the range of disabilities that may be represented in a particular classroom, the rural classroom teacher may have neither the time nor the skills to provide an adequate program of education for handicapped children. To complicate matters, the child as a member of a minority group is likely to acquire a value structure and world view which is distinctly different from that of the child socialized in the dominant culture. Even the assumption that teachers are free of categorical prejudice is all too often wrong. If we add to this the handicapped child's exposure to the teasing, taunting, and outright rejection by age peers, we come close to approximating the actual school experience of a handicapped rural Indian child. Obviously, the American ideal of a child's equal opportunity for schooling is jeopardized under these conditions and the notion that the public school system is the "great equalizer where kids from various backgrounds grow up like everyone else" is a simplistic platitude.

In December 1984, we mailed a loosely structured questionnaire to 40 Indian advocates who function as paraprofessional aids to social workers and school personnel. Our sample comprised more than 80% of the Indian people employed in rural school districts and rehabilitation centers in Minnesota. From the 36 completed questionnaires returned, we found that 27 respondents (75%) perceived the rural school setting to be a problem for handicapped Indian children. Of the nine persons who did not give this response, eight represent schools which are within fifty miles of an urban center, thus minimizing the isolation effect of the rural setting. We further asked our respondents to rank order five factors which negatively affect their work.

The most common response was that in rural public schools there exists a definite lack of understanding for the cultural needs of Indian handicapped children and consequently there is insufficient budgetary support. (Thirty-six times ranked among the first three factors.)

The second ranked factor referred to value conflicts and lack of rapport between Indian and non-Indian rural residents. (Thirty-one times among the first three factors.)

The third factor reported dealt with rural distances and the concomitant isolation between home and school. Concerns about long travel, poor roads, and the effects of bad weather on school bussing were included in the response. (Thirty times among the first three factors.)

The fourth negative factor referred to the lack of professional special services for handicapped children. (Twenty-six times ranked among the first three factors.)

The fifth negative factor indicated problems of staff burnout, stress, and frequent turnovers. (Twenty-five times ranked among the first three factors.)

While we recognize that the informality of our questionnaires does not yield data for sophisticated analysis, we find that the responses corroborate our initial observations. We also find confirmation and encouragement for a Minnesota pilot project wherein Indian adults are trained as school liaison and support personnel in special education.

Five years ago, we had become very much aware that the cultural needs of Indian children attending school in rural Minnesota had to be better interpreted to teachers, administrators, and school boards. It is unfortunate that racial bias and lack of cultural awareness are common experiences encountered by Indian children in public schools. At this very moment Indian children in public schools in rural Wisconsin and Minnesota are exposed to rising racial tensions over treaty rights. One can assume that a handicapped child is especially affected by these cyclical outbreaks of anti-Indian hostility. On the basis of our observations and experience, we identified three interacting dimensions which in their compounding effect, significantly interfere with an Indian child's education. Specifically, they are: 1) the minority status of Indians, 2) the rural isolation and poverty in and around reservations, and 3) the limitations associated with handicaps, ranging from mild learning disabilities to severe problems of mental, physical, and emotional disorders. At present, certified Indian special education teachers are practically nonexistent and white special education teachers who combine the skills of working

"...the notion that the public school system is the great equalizer...is a simplistic platitude..."

with the handicapped and who show cultural awareness of Indian values are difficult to find.

As a reaction to this problem, five years ago with the support of the Indian Educational Section of the Minnesota State Department of Education, we developed a program at the University of Minnesota, Duluth, to train Indian adults as school liaison persons and aids in special education assigned to treatment centers for handicapped children (Steucher, 1985). The Indian advocates, as they are called, obtain University certificates on the basis of a three year interactive learning program which combines academic performance tasks with on-the-job training and inservice seminars. Upon completion of the program, the liaisons can perform paraprofessional roles which integrate Indian value dimensions into the complexities of teaching the handicapped child.

"There seems to be a sense of vicarious achievement for the whole tribal community when one of their own becomes a certified Indian advocate."

Specifically, the advocates interpret and communicate the concerns of Indian parents to the school and to non-Indian professionals. In turn, they also explain the various aspects of education, treatment, and rehabilitation to the parents. They are also trained to ascertain that the procedures, guidelines, and laws relative to diagnosis, treatment, and rehabilitation goals are observed.

The advocates are facilitating interagency contacts for children whose needs cannot be met by local facilities. Appointments and travel arrangements to visit urban treatment centers and social service agencies bring children and parents into contact with the type of help that is usually not available in rural settings.

Maintenance and promotion of a positive Indian self-image is another important role of the Indian advocates. Fortunately, we no longer live in an age, in the words of C.H. Edson, "when assimilation, Americanization, and the 'Melting Pot' were held to be desirable social goals." Now we "...acknowledge how cultural diversity enriches our society by supporting bilingual and bicultural classrooms." (Edson, 1985, p. 95). From our perspective, the rehabilitation of a handicapped Indian child is not only a matter of combining good facilities with good technical treatment skills, but of a holistic process including caring and loving and joy. To provide the handicapped Indian child the opportunity to feel good about being Indian means to provide the child a means to feel good about himself. It is for this reason that the Indian advocate provides the integration of the handicapped child in Indian cultural events as an important part of the rehabilitation process. A further benefit is the improved communication with the parents of handicapped children. The advocates bring new awareness and encouragement to the families of the children. They take the mystery out of medical jargon and treatment procedures and they bridge the gulf of bureaucratic demands through their help in filling out forms. They enter into a partnership involving the family and the school or treatment center for the expressed goal of benefiting the child. In this manner, the advocate can represent the interests of the child in staff conferences in a manner which reflects not only the specific need of the child as a handicapped person, but also the need of the child as a member of Indian culture.

Finally, we want to point out the benefits for the Indian advocate both as a person and as a member of a tribal community. All advocates are from rural areas and most come from reservations. They enjoy the double benefit of a paraprofessional status and employment by the school districts. Their training and skill make them valuable resource persons for the reservation community in a much broader sense than their specific role as paraprofessionals in special education. There seems to be a sense of vicarious achievement for the whole tribal community when one of their own becomes a certified Indian advocate. And last but not least, there are nearly 60 rural Indian persons who have broken the cycle of deprivation and poverty and who provide, by their paychecks, more than economic improvement; they provide a living role model of achievement and a glimpse of fairness for our Indian children. American public education may yet serve the interests of all its students.

Resources

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Variables influencing special education teacher employment in rural areas

by
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Morgantown, WV

Teacher Employment

Implementation of special education programs in rural areas has been a major focus of professional concern since the passage of P.L. 94-142, which made a free, appropriate public education the right of all handicapped children. With over two-thirds of the nation's schools situated in rural areas, the majority of unserved and underserved handicapped children are found in rural districts (Halpern, 1982; Sher, 1978). A continuing source of frustration in the development of programming for these students has been difficulty in recruiting and retaining special education personnel.

The National Rural Research and Personnel Preparation Project (Helge, 1980) cited problems in recruitment and retention of qualified staff, respectively, as first and third in importance as barriers to program implementation. A survey of state directors of special education in 19 rural states (Helge, 1981) reported a teacher turnover rate of nearly 100% every three years and cited geographic conditions, low salaries, certification requirements, and availability of training programs as primary factors in recruitment and retention. A study of teachers of the visually impaired in ten rural states (Bina, 1981) revealed that teachers in very rural communities had lower morale scores and were more likely to seriously consider leaving their present jobs. Such findings suggest the need for further investigation of the factors associated with recruiting and retaining special education personnel in rural areas. This study was designed to elicit information about perceived causes and possible remedies for retention and recruitment problems from special education administrators in rural school districts, as well as to identify any changes in the employment situation over a four year period.

Method

Questionnaires using items with a yes-no format followed by an open-ended response were mailed to the school administrator responsible for special education programming in 50 school districts within the central Appalachian region, selected as rural on the basis of U.S. Census Bureau standards. The initial set of questionnaires was mailed in Spring, 1980, and the follow-up set in Spring, 1984, with a return rate of 100%.

Results and Conclusions

The number of special education positions increased only slightly from 2044 in 1980 to 2080 in 1984 (range = 15 to 115, mean 45.7), with the number of unfilled positions falling from 161 (8%) to 50 (2%), but the number filled by uncertified personnel climbing from 429 (16%) to 580 (28%). Approximately two-thirds of the respondents reported difficulty in recruiting teachers for special education positions and nearly half reported retention problems in both years (see Table 1). The turnover rate was established at approximately 90% every three years. While the total problem remained fairly constant, respondents reported changes within most specialization areas: a significant drop (more than 50%) for learning disabilities, hearing impairments and mental retardation, and a sharp rise (nearly 30%) for severe handicaps, behavior disorders and physical handicaps. The percentage reporting difficulties in vision impairments and communication disorders remained about the same. These findings suggest that the overall recruitment/retention problem has not changed, but that the programs in various areas have been impacted at different times.

Table 1

Percentage of Respondents Reporting Employment Problems

Areas of Difficulty	1980	1984
Recruitment Problems	67%	62%
Retention Problems	45%	40%
Exceptionalities: mental retardation	32%	8%
severe/profound handicaps	9%	13%
learning disabilities	82%	30%
emotional/behavior disorders	45%	60%
vision impairments	27%	24%
hearing impairments	45%	19%
physical/health impairments	9%	23%
communication disorders	36%	40%

Percentage of Respondents Selecting Explanations/Solutions

	Recruitment		Retention	
Explanations	1980	1984	1980	1984
personal decisions	-%	-%	92%	84%
geographic location	82%	51%	22%	27%
salary/benefits	68%	51%	26%	27%
personnel shortages	88%	60%	0%	0%
working conditions	6%	11%	43%	44%
Solutions				
expand recruitment efforts	44%	0%	-%	-%
offer incentives, supplements	6%	38%	78%	74%
increase training availability	65%	57%	5%	4%
simplify certification requirements	12%	14%	15%	13%
improve working conditions	0%	0%	22%	16%

Recruitment

When asked to state the major reasons for difficulty in recruiting teachers, respondents most often cited a general unavailability of unqualified teachers (see Table 1). Many listed isolated geographic locations and low salary/benefits as significant factors, and a few made reference to unsatisfactory working conditions (physical facilities, paperwork, support systems). The relative ranking of these causes remained stable from 1980 to 1984. In addressing the question of solutions to recruitment problems, over half the respondents in both years recommended improving the availability of training programs to insure a larger pool of certified personnel from which to hire. Several respondents in both years also suggested simplifying certification requirements to enable personnel hired for special education positions to become certified more quickly. In 1984, more than one-third of respondents (as compared with only a few in 1980) believed that salary supplements or other incentives would encourage more teachers to accept positions. Many respondents in 1980 felt that expansion of recruitment efforts (via advertising and contacts with colleges outside the geographic region) would be helpful in locating applicants, but by 1984, no one offered this as a potential solution. No respondent in either year recommended improvement of working conditions.

Retention

When asked to explain why special education personnel left teaching positions, the overwhelming majority of respondents attributed retention problems to personal decisions (such as moving as a result of spouse's relocation, maternity leave, return to the regular classroom, or retirement from teaching). Nearly half blamed unsatisfactory working conditions or "burnout" from the demands of the position (e.g., too much paperwork, excessive caseloads or class sizes, legal complications, certification requirements). Many cited financial concerns (low salaries, lack of incentives) and some felt geographic isolation from economic, social and cultural opportunities or dissatisfaction with rural living was a major factor. Most respondents in both years offered two solutions for reemployment problems: nearly three-fourths indicated that monetary incentives (such as salary increases, tuition waivers/stipends, or supplements) would influence teachers to remain in special education positions, while almost half suggested increasing the number and availability of training programs so that teachers employed under temporary permits could obtain the coursework and practica required for certification. Relatively few respondents in either year recommended administrative solutions in the form of improved working conditions, better facilities, or more supervisory support.

Discussion

The results of the study clearly show that the overall problem of teacher recruitment and retention for special education programs in rural areas has changed very little in four years. Expansion of teacher training programs has not kept pace with the needs of rural schools for additional personnel nor met the demand for teachers to replace those who have discontinued employment. Although increasing the number and availability of training programs was the solution most often cited by respondents, it seems clear that other steps must be taken to solve the employment problem.

"...the overall problem of teacher recruitment and retention for special education programs in rural areas has changed very little in four years."

The teacher turnover rate for rural special education has been estimated as high as 100% every three years (Helge, 1981), a finding confirmed by respondents in this study. Training more teachers may allow administrators to fill positions as they become vacant, but continual replacement of teaching personnel will not solve the turnover problem and will serve rather to jeopardize both professional development and program stability. Such a practice promises to have serious negative consequences for consistency in curriculum development, instructional programming and classroom management.

A closer look at alternative solutions for recruitment and retention problems is urgently needed. Although working conditions are commonly recognized as a significant factor, administrative remedies directly addressing this concern are rarely recommended. Some research, however, suggests that more frequent and supportive supervision and other administrative assistance, is associated with improved teacher morale and retention (Goodlad, 1984; Lanier, 1984). Administrators must develop strategies for improving working conditions and reducing "burnout" to encourage teachers to remain in special education.

Teacher recruitment and retention problems are intimately interrelated. Decreasing the turnover rate by encouraging teachers to remain in special education will necessarily relieve needs for hiring new personnel. Recruitment programs providing support to beginning teachers will improve the retention of experienced personnel. A coordinated effort by teacher training programs and school districts directed at practicing teachers, therefore, probably represents the most appropriate strategy for addressing recruitment and retention problems together. When teacher trainers offer inservice programs on a

continued...

regular and continuing basis designed to meet the teacher's immediate needs, and local administrators follow up with consistent and supportive supervisory contacts, retention problems (and with them recruitment problems) can be alleviated. The challenge to universities and school districts for the future is to develop innovative, integrated, and comprehensive programs to provide supervision and consultation support to beginning and experienced special education personnel in rural areas.

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Putting computers to work: University of Washington delivers personalized services to rural families

How can computers help families of young handicapped children who live in rural areas or who do not have access to local services for their child? The staff of the Computer-Assisted Program (CAP) Project have developed a model that agencies will be able to access which offers individualized programs parents (and teachers) can use to develop their children's skills. The CAP project in Seattle, Washington was established to help families in parts of the country lacking regular early childhood special education programs. A third-year project in the Handicapped Children's Early Education Program network, CAP serves 15 families per year in a center-based demonstration program at the Experimental Education Unit, and 50 field-based families across the country. The core of this project is a comprehensive set of home-based activities which parents can enjoy with their children during routine daily interactions--for example, during bath time, dinner time, or on trips to the grocery store or the park. Parents assess their children's development quarterly, and activities are based on the assessment results which project staff review and match to a computerized set of over 700 learning activities.

Rural families or families in underserved areas who wish to participate in the project must meet several eligibility criteria: Their child (0-3 years of age) must be declared handicapped by a local physician, and the parent(s) must provide a physician's clearance before their child can receive services; parents must arrange for their child to be tested on a standardized screening instrument by a local agent to confirm the child's delay; their child cannot be served in a local center or home-based program more often than twice a month; the parent(s) must agree to complete the program activities and assessments.

The home activity packages which are provided to families are generated on the Experimental Education Unit's WANG Alliance computer system. The project is being adapted for use on a personal computer (microcomputer).

In addition to the home activity packages, CAP staff have prepared several pamphlets for parents and professionals who work with young children. These include one on how to select toys for children with special needs, one on toilet training, and one on encouraging sitting and reaching behaviors in children with low muscle tone. The pamphlets are available upon request.

Parents who would like more information on the CAP project should contact Ms. Susan Sandall, CAP Coordinator, Experimental Education Unit, WJ-10, Child Development and Mental Retardation Center, University of Washington, Seattle, WA 98195, (206) 543-4011.

Using SpecialNet to research legal questions

Having ready access to current legal opinions on Special Education related cases is usually a low priority, until a legal issue becomes a primary focus of a rural district. Resources such as EHLR *(Education of the Handicapped Law Reporter)* seem very expensive or inaccessible. However, SpecialNet subscribers have an excellent resource as close as their computer terminal.

The LITIGATION board contains summaries of court cases regarding special education. This board is cumulative, that is, it is never purged. In this way it becomes an ever-growing data bank of relevant court cases. Most entries are submitted by "RIGHT-TO-ED" in Pennsylvania, which runs the board, by EHRL, or by NASDSE (National Association of State Directors of Special Education). The cases are filed by topics and can be retrieved at a later date by scanning the board by topic.

Specific topic headings currently identified include: appropriate program, tuition, attorney fees, related service, supreme court, extended school year, school discipline, surrogate parent, OCR, contract, Rowley test, change in educational placement and competency testing.

You can also send specific questions to the LITIGATION board itself, or to the RIGHT TO ED mailbox. They will attempt to the requested information as soon as possible.

Queries about LITIGATION access and use may be addressed to Shirley Coale, Education Technological Specialist, Western Regional Resource Center, University of Oregon, College of Education, Eugene, OR 97403, (503) 686-5641. More information about SpecialNet is available through National Systems Management, 2021 K Street, N.W., Suite 315, Washington, D.C. 20006, Attn: SpecialNet, (202) 296-1800.

Allegro: a computer assisted clinical report writing procedure

Allegro was developed by the Child Development Program of the Umatilla County Education Service District in Oregon to assist with the creation of psycho/educational evaluation reports. *Allegro* consists of an 87 page manual, worksheets and diskettes in both DOS 3.3 and ProDOS versions. Each is intended to aid the responsible professional in the task of writing high quality, intelligible reports. User responsibility for the accuracy, validity, and reliability of printed statements, interpretations, judgments, and recommendations is made possible by means of writer-controlled options as well as his or her unique comments ("wild cards") which are an integral part of all *Allegro* materials.

To construct a report, the writer enters onto a specially designed worksheet the filenames of options selected from the "wild cards" and the user's manual. A secretary then uses the worksheet, the report writing diskettes, and Apple Writer II to word process and print the actual report. Since the worksheet allows the writer to extend, modify, or ignore computer files, the final product is a printed report containing computer-stored text of general applicability, as well as writer-composed text relevant to the unique characteristics of the specific case for whom the assessment was conducted.

The user's manual and diskettes are organized in a manner that allows deletion, expansion, and modification of the program by persons other than the creators. A variety of professional orientations can thus be represented by the textual information stored on disk. The authors have considered extending the program to handle the generation of speech, language, audiological, and physical and occupational therapy reports. *Allegro* is also a potentially useful instructional tool for colleges and universities charged with training a variety of evaluation specialists.

A recent conference sponsored by the Evaluation Center of Western Oregon State College resulted in the creation of one California and seven Oregon sites to assist with further field-testing. Final results are not yet available, but the general perception to date is that *Allegro* operates efficiently within a field-based setting and reduces the amount of time required to produce a report.

Questions concerning report quality are being addressed by means of a blind study in which report readers are being asked to judge both non-*Allegro* and *Allegro*-assisted reports with respect to 22 characteristics. Initial data indicates that the program is capable of generating documents of higher communicative quality than previous hand-written reports.

Those interested in the *Allegro* program should contact Frank J. Nicassio, Child Development Program, Umatilla County Education Service District, P.O. Box 38, Pendleton, Oregon 97801.

RECENT PUBLICATIONS

Psychiatric Services for Underserved Rural Populations

L. Ralph Jones, M.D. and Richard R. Parlour, M.D., ed.

Of special interest to school psychologists in rural settings:

In recent years there has been increasing awareness of the need for making health and mental health services more readily available to those living in rural areas and small communities who have been isolated from such services.

This volume addresses the major issues in rural psychiatric service delivery and shows how a broad range of human services professionals, paraprofessionals and support groups, have met the challenge of providing adequate mental health programs and services to rural populations and of developing appropriate organizational and treatment approaches to meet their very special needs.

This volume will be of value to professionals and students in a number of disciplines that address the mental health of rural populations, including psychiatry and psychology, family, pediatric, internal and preventive medicine, nursing and social work. *(from the flyleaf)*

Brunner/Mazel Publishers
19 Union Square
New York, NY 10003
(212) 924-3344
1985. Hardcover, 322 pages; $37.50

America's Country Schools

by Andrew Gulliford

One of the backbones of the American educational system, and of American culture itself, is the one-room schoolhouse. Anyone concerned with rural development needs to be aware of the history of country schools, and their replacement by consolidated schools. "That process," says Gulliford, "did more to divide and immobilize rural resources than any other movement in the 20th century."

In his book, Andrew Gulliford maintains that the country school of yesteryear serve as a valuable model for education today, especially for special education. The key, he believes, was the interrelatedness of the community around the schoolroom. People were involved, older children taught the younger ones, and community functions took place with the school as a hub.

Preservation Press
National Trust for Historic Preservation
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036; (202) 673-4058
1984. Paperback, 296 pages, 400 b/w illus.; $18.95.

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Plus the *New* **Occupational Title Lists** (OTL) which aids vocational evaluators in selecting practical jobs for clients based on their R-FVII scores. A total of 698 job titles are listed in the OTL using information from the *Dictionary of Occupational Titles*.

Conference report:

1985 National Rural Teacher Education Conference

The 1985 National Rural Teacher Education Conference involved over 200 representatives of higher education, rural schools (including a number of one-room schoolhouses), state education agencies, school board members, and cooperative extension agencies. Participants came from every state, three Canadian provinces, and the Phillipine Islands.

The conference was co-sponsored by the National Rural Development Institute, the American Association of State Colleges and Universities, the American Association of Colleges for Teacher Education and Phi Delta Kappa. Conference participants formed the National Rural Teacher Education Consortium which is concerned with innovative rural preservice and inservice training programs and with making certification standards appropriate for rural school needs.

A position statement sent to the American Association of Colleges for Teacher Education contained a series of resolutions calling for teacher training programs to recognize that rural schools are a sizable constituency (67% of all schools) and that they are faced with acute personnel shortages. The resolution further stated that rural teachers require unique training and motivation to be attracted to rural school positions and must be trained to work with multiple age and ability levels.

The Consortium urged that state education agencies recognize that teacher certification requirements should be flexible for rural areas while ensuring quality education for rural students. The group further encouraged state education agencies to design structures for regional certification reciprocity.

The Second Annual National Rural Teacher Education Consortium will be held October 7-10, 1986 and will again be a cosponsored event hosted by the National Rural Development Institute at Western Washington University in Bellingham, Washington. Special tours to Expo '86 in Vancouver, British Columbia will be available.

For a copy of the 1985 conference resolutions, proceedings from the 1985 conference, or to be placed on the mailing list to receive the 1986 Call for Papers, write the National Rural Teacher Education Consortium, National Rural Development Institute, Western Washington University, Bellingham, WA 98225, (206) 676-3576.

Sixth annual national rural special education conference

The American Council on Rural Special Education (ACRES) will hold its Sixth Annual National Rural Special Education Conference in Tucson, Arizona, at the Holiday Inn Holidome, April 22-25, 1986. In keeping with the conference theme, over 150 presentors will offer practical, down-to-earth programming suggestions to the rural service providers, administrators, teachers, and parents attending the conference. Each presentor will be affiliated with effective programs or preservice training designed to enhance services for rural individuals with disabilities.

The conference theme is 'Practical Approaches for Rural Service Delivery.' Although a wide variety of topics have been outlined for both the 'early bird' and the general sessions, other topics related to the conference theme will be considered by proposal reviewers.

ACRES is now receiving proposals for presentations at the National Rural Special Education Conference. Proposals must be submitted by **December 20, 1985**. Any postmarked after that date will not be accepted.

For more information on the conference, or for information on presentation proposal requirements, please contact: ACRES Conference, 359 Miller Hall, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

RSEQ Changes

By now you, the reader, may be aware of some striking changes in the *Rural Special Education Quarterly (RSEQ)* over the past two issues. Changes are being made to the cover, logo, layout and print style. The most fundamental and exciting development has been the evolution of an editorial board (see inside front cover).

The *Quarterly* staff is proud to have an editorial board consisting of professionals from such a variety of backgrounds and affiliations. This board will assist the editorial staff in the acquisition, review, and selection of articles for publication. To the board -- a warm welcome, and a 'thank you' for your commitment toward the continued growth of professional quality in the *Quarterly*.

It takes a 'leap of faith' to be the first to venture forth on untried waters. Recognition is therefore also in order for the first of our advertisers (see this edition) to appear in the *Quarterly*. Their support is appreciated.

Finally, since the policy of the *RSEQ* is to respond to the readership, we welcome your reactions to the *Quarterly* - its content, its format, the latest changes, etc. All comments will be given full consideration. ED.

RSEQ

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The *Rural Special Education Quarterly* is produced by the National Rural Development Institute and is the only national scholarly publication solely devoted to rural special education issues. The purpose of the *Quarterly* is to provide articles concerning federal and other events relevant to rural individuals with disabilities, progressive service delivery systems, reviews of relevant conferences and publications, and sources for rural special educators. The publisher cannot accept responsibility for the correctness of information supplied to our office or for opinions expressed. The mention of commercial products, their sources, or their use in connection with material reported herein is not to be construed as either an actual or implied endorsement of such products by the *Rural Special Educational Quarterly*, its affiliates or sponsors.

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Keys to the world: microcomputer use in telecommunications

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Introduction

It is a basic assumption of this paper that present conceptions of the "disadvantaged learner" might evolve into that of the "remarkable learner" as educational research and advanced computer technology lead to effective designs of general methodology, a sharpened focus on human learning, and a reexamination of this society's present modes of communication.

Communication is one of society's most significant accomplishments primarily because it enhances the capacity of intelligence and social interchange. Inefficient, ineffective, or nonexistent communication skills isolate and restrict the power of intellect.

With the general application of microcomputer technology and data communication processes, one can realistically expect the special needs individual to demonstrate enhanced competency and self-esteem as technology facilitates the growth of independence.

Rural special education and technology

Although the post 1975 environment in the United States marked major improvements in the quantitative impact of all services provided for rural-based special needs populations (Helge, 1984), qualitative service delivery in rural areas will continue to challenge the innovativeness of educational leaders. Rural special educators universally share frustration and disenchantment as they wrestle with urban-oriented service models that assume large population bases and homogeneous service populations. The impact and effectiveness of many special education undertakings in rural settings demand an inordinate amount of human energy and financial support, and often, therefore, significantly increase the interpersonal tensions of those involved.

To illustrate, using 1984 as the base year and the Northwest Territories of Canada as the venue, 49,000+ inhabitants were spread over 3-1/3 million square kilometers (1,304,900 square miles). Visualize approximately one inhabitant for every 70 square kilometers of relatively harsh terrain. Visualize further an ethnically diverse population in which handicapped individuals are disproportionately affected by climatically-induced factors (e.g., chronic otitis media) and socially-induced factors (e.g., fetal alcohol syndrome). It is apparent with today's value system that traditional service models based on institutionalization and consequent severance from family/community ties are inappropriate. Such a population requires ingenious and bold innovation if the ideal of individualized service is to be attained in the home community.

Isolation in its physical, interpersonal and intrapersonal dimensions is the primary obstacle to overcome if the rural handicapped are to achieve meaningful standards of normalization and integration. The rural special education environment therefore provides fertile soil in which to implant cost-effective and time/energy enhancing technological aids, especially telecommunications technology, which could enhance personal and interpersonal competence. As Helge concluded:

> "Rural schools have generally had less accessibility to most forms of educational technology . . . The smallest and most isolated rural schools can potentially gain the most from the current technological flurry." (Helge, 1984, p. 1)

Telecommunications: (intra)personal computers become interpersonal

The decade of the 1980's has seen the union of standard forms of telecommunication such as the telephone, radio, and television, with computer-based data processing and information management. The technology responsible for this convergence is called networking, which is the computer-controlled system for managing information across locations. An established example of an effective electronic network is DEAFNET. It has been generated and maintained by GTE Laboratories, and provides those with auditory difficulties an international access to interpersonal communications via electronic mail and bulletin board information sharing.

Telecommunication processes managed by network systems have extended our communication neighborhood from relative "back-fence chatter" to global interaction in less than a decade. The lives of individuals affected by handicapping conditions living in isolated communities can be radically improved through vigorous individual, collective, and corporate advocacy in bringing these developments to their service. For example, electronic bulletin boards presently give many teachers and parents with special needs children the ability to directly and inexpensively access and retrieve qualitative curriculum strategies validated elsewhere. Information utilities such as SpecialNet have arisen to allow subscribers to access large specialized libraries of special education information.

Another example of a facilitative human service is Project SHARE, jointly operated by a 109 member international cooperative organization called the International Telecommunications Satellite organization (INTELSAT), and the International Institute of Communications. This service experimented through 1985 with a wide range of telecommunications technologies to investigate improved health and education services to rural and isolated parts of the world.

Taber (1984) identified five significant freedoms which

continued . . .

would accrue to individuals with special needs and their advocates through the effective use of technology. These include the efficient/effective use of time, the enhancement of learning processes and outcomes, greater environmental independence, and meaningful involvement in gainful employment. Such primary achievements can be expected from the judicious application of technology on behalf of those with special needs, and each relates directly to the enhancement of communication - Taber's fifth freedom.

Given the priority assigned to communication skills in our society, the most important potential freedom achieved through technological intervention is the freedom to communicate (Romich & Vagnini, 1984). Two examples of such liberating technology are: Autospeak, a text-to-speech synthesizer which allows a speech-impaired person to pre-enter as many as thirty-two sentences and direct these at will to a speech synthesizer; and the Cacti Communication Program, which enables the printing of words/phrases on the screen or printer with a minimum number of key presses.

A prototype delivery system developed to reach severely developmentally delayed and multiply-handicapped preschoolers in their homes was the Kentucky Project (Tawney, Aeschleman, Dueton & Donaldson, 1979). These low-incidence heterogeneously handicapped populations received quality educational service delivery through the medium of technology.

The visionary objective of a school without walls is now possible, enabled by the application of computer-generated/telephone-delivered instruction from a knowledgeable source to populations previously isolated by age, severity of handicap, and physical distance.

Microcomputer telecommunication for special needs populations

> In the network environment, rewards come by empowering others, not climbing over them.
>
> Naisbitt, 1982, p.204.

Today, communication media thought visionary in mid-century are now a pragmatic reality. Today even relatively unsophisticated computer users are able to participate in the global village through the use of modems and other peripheral devices.

As a result of the applications of these types of technical advancements, immediate benefits have already been achieved for individuals with almost any type of physically and sensorily-handicapping conditions, in increasingly efficient and cost-effective modes (McWilliams, 1984). For example, adaptive enhancements to normal, direct selection keyboarding include keyguards, headsticks, and expanded (larger key) keyboards. Scanning, or indirect pointing, is made possible by on/off microswitches and can be activated by a single movement (Vanderheiden, 1983). Photo-digitizers, voice recognition units, and speech synthesizers will be integrated and improved to the point that standard keyboards may well become obsolete and thereby remove one of the larger obstacles to mass computer interaction. In the near future all special needs populations are projected to benefit from this technological catalyst.

Perhaps because of the pressing and massive needs of its human charges, special education appears to have come to respect technology as the most powerful normalizing and integration agent yet encountered. To assist the disabled to achieve such a promotion to independence, however, the educational, social service, and business/technical populations must be motivated to advocate vigilantly on their behalf.

As Romich and Vagnini (1984) point out, the first step towards equity of access is awareness building by those advocates of the possibilities inherent in technology. Next, the best interests of the client must be served through proper application. Finally, funding for technical aids and services must become straightforward.

Problems associated with microcomputer telecommunications

Technology proponents must remember that it is not seen as a panacea by the rest of the world. It is viewed by some with fear to the point that the term "technophobia" is applied to describe their reaction to it. The cycle of rejection which many special needs individuals face is also well known. Arming such individuals with technological hardware may act to create even further social distance from those who feel alienated from both.

Other human issues can act to stifle effective electronic networking capabilities. Recently, Southern, T (personal communication, October, 1985) presented his view of key difficulties which if left unchecked, will eventually "kill" an electronic board. These issues include: initial novelty being soon replaced by apathy; the time delay of board managers not keeping information current and response-effective; restricted access to students and other legitimate users; the fear of committing to a medium ideas and the like which might later be criticized by more knowledgeable individuals; and finally, the conditions under which human brain and applied intelligence (termed "wetware") work in harmony or disharmony with hardware and software components. In other words, there are a myriad of problems which arise because of the inappropriate consideration of the psychosocial impact of a new form of communication imposed on a social environment with a clearly defined hierarchy of traditional communication rules.

four problem areas that act to restrict technological effectiveness in the rural special education environment. These include the relatively immature state of the art of applied technology, the fiscal inadequacies in providing for appropriate staff training and hardware/software acquisition, the pressing problem of appropriate staff development and sup-

port, and the potential rejection of technology by parents and others in the community who see it as personally dehumanizing.

Helge (1984) noted that rural areas present special challenges that go beyond technological limitations, fiscal inadequacies and staff development issues. She urged parent and community support through personal contact, to overcome the often-held idea of technology as an alien influence.

In the domain of public education, innovation in both attitudes and methodology is not commonplace. For example, a study commissioned by the National Science Foundation in 1973 reported a time lag of two decades between discovery and implementation of ten major technical inventions (Illbach & Hargen, 1984). Even today, the mass presence of microcomputers in schools is not a guarantee of their appropriate utilization or equitable distribution to children.

Conclusions

A planned change approach to microcomputer implementation through complete assessment and evaluation procedures such as Illbach and Hargen (1984) suggest, deserves special scrutiny. At the same time, waiting a decade or two to apply and enhance present technology that today can enrich the communication options of those with disabilities is to deny them a multitude of life-supporting experiences.

Microcomputers have already demonstrated their ability to support improved initial learning and transfer of knowledge organized and delivered by competent teachers. Microcomputer-based telecommunications can widely expand that potential if we are prepared to examine a new set of human relationships occasioned by significantly altered modes of communication.

Several issues need to be resolved. These include: 1) equal distribution of fiscal commitment to develop both educator competence and access to hardware, 2) a public reexamination of the traditional views of communication and of the perceptions of individuals with disabilities to efface the segregation/rejection cycle, and 3) implementation within a humanized context.

These issues, brought to the surface by technological innovation, must be addressed by the educational community at large, if a significant redesign of human potential is sought as a major objective in the global village.

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Advanced degrees in rural special education

If you are working in a rural area and are interested in obtaining a master's degree in special education, you might investigate the program at Western Oregon State College which is designed to prepare teachers to work with mildly handicapped children in rural areas. Emphasis is placed on serving a broad range of handicapping conditions, including learning disabilities, emotional disorders, and mental retardation.

One of the required competencies is the ability to identify and demonstrate skills necessary for working with selected cultural groups, such as Native American, Hispanic, Asian, etc., in a rural community. Students are also taught to identify characteristics of rural communities, and demonstrate the ability to solve problems related to personal and professional needs that exist within a rural setting. Further competencies include the development of cooperative services when working with related agencies in rural settings and the ability to "culturally screen" materials, assessment instruments, and program placement recommendations. Administrators of the program feel that the continuing professional development of rural special educators in this area will result in such benefits as: (1) more handicapped students identified in rural Oregon, (2) a continuum of services for rural handicapped students, and (3) less employee turnover among rural special educators. For more information, contact Bonnie Staebler, Coordinator, Rural Special Education; Western Oregon State College; Monmouth, OR 97361.

Rural electronic bulletin boards and computer networks

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Picture a school bulletin board or one in a grocery store. The normal bulletin board has messages tacked up from many sources, many of which are anonymous. The Electronic Bulletin Board (EBB) is based on the same kind of system except that it can be read only with the assistance of a computer and modem or a terminal.

Marrs (1984) has proposed the use of the EBB as a way of developing better communication among rural special educators. This article will describe this technique, explain how other school clientele might use the EBB, detail services which could be provided, and suggest some future possibilities which are technologically feasible, but are not yet cost effective.

Networks

The Electronic Bulletin Board is one of the possible components of, or uses for, an electronic network. The EBB is composed of, at minimum, a computer, a disk storage device, and a modem. Computer users with modems at remote locations can connect with the EBB by telephone. Alternately, the EBB may be a feature of a larger electronic network such as COMPUSERVE, the SOURCE, or as part of the special purpose network such as EDLINE which is sponsored by the American Association of School Administrators (Ratcliff, 1985). Many of these special purpose networks are described by Pierce (1984) and by Raimondi (1984). Generally the remote system is activated, and accessible to potential users, with an 800 or WATS number.

How it works

When EBB users call in, they type their private password and are identified by the system. Then they are given a certain access level determined by the system operator (sysop). This procedure is called "logging on". The first message that will appear on a user's screen concerns the status of electronic mail. Bulletins can then be scanned to determine which titled items the user wants to read. Through a simple menu any number of bulletin boards may be accessed. If users of the EBB have the proper software and printer combinations, all messages—letters, bulletins, and other information transmitted from the EBB—can be printed out on "hard copy" (computerese for paper).

Electronic mail

Electronic mail is the creation of a mail box, or designated space in a computer's memory, which has been assigned an address and to which messages may be sent. When a person logs on the system, mail items (messages) are listed. One of the strongest features of the EBB is that members can leave electronic mail for each other in total privacy. The mail is delivered to the addressee's electronic mailbox immediately after the sender gives the command to "send". The "letter" will be waiting whenever the addressee calls up the EBB. The receiver can decide to read the letter at that time or wait until he or she has more time or privacy. The system allows the receiver to send an automatic reply to each letter received (Fersko-Weiss, 1985).

There are many uses of electronic mail in rural settings. For example, a rural user may send messages/letters to any of the faculty or staff of schools or colleges on the EBB to obtain information about some event, topic, or program of interest. These "letters" may include documents for revision or printing (Panko, 1984), and "on-line" consultation with faculty and graduate students at participating institutions (Dreher, 1984). Additionally, students or clients may occasionally send letters to other users of the system.

Bulletin boards

While electronic mail is accessed only by the sender and receiver, all users can read the EBB. Rural uses of EBB's include a "community calendar" listing of school or other organizational happenings, as well as the reporting of events or sharing of learnings derived from local, state, or national meetings of professional organizations. The development of a philosophical platform — arguing for a cause or developing support for a position (legal, ethical, professional, etc.) is another use of the board. Replies to a board can be sent either by private "E" mail or as public listings on the Bulletin Board.

An example of what has been done with an EBB comes from the "Remote Electronic Practicum" developed at one rural university. On-line communication occurred between classrooms at the university, and classrooms or clinics throughout the area, allowing the faculty and students to provide time and assistance to a broader range of professionals, students, and clients than before. For example, one of the practicum students was able to develop lessons for a school child, interact with the child while he or she performed the lesson, evaluate the performance, and make suggestions and changes — all without leaving the university. Additionally, the lessons were loaded into the system and were waiting for the public school student and his or her teacher to call up and use, independent of the university student or faculty member. Later, the school child's work was recalled by the practicum student, checked, and the next lesson entered into the system for use (Marrs, 1984).

Electronic Bulletin Board Networks can dial up larger networks including data bases (e.g., ERIC, Psychological Abstracts) during low cost periods. Messages can be accepted for a variety of boards or message services and posted later in blocks or according to some priority.

Bulletin boards in university settings have been used to assist rural users with diagnosis and prescription. An inexpensive electronic reader can be used in the field to machine score answer sheets for future transmission over modems to

university scoring services. Diagnostic or criterion test item pools have also been formed, where users contribute items which match objectives in a variety of content areas, and then select and print any length of test desired for any specific content. The natural spin-offs of such a process are teacher-developed and tested diagnostic and prescriptive materials banks in given content areas which can be printed onto diskettes (Heidelbach, 1985).

The EBB can serve other uses including: libraries of user owned public domain programs, on-line evaluations of commercial programs prior to purchase, materials trading, mentor exchanges using local specialists, electronic newsletters, summaries of new research and publications, provision of correspondence-like courses, volunteer matching services, student recruitment for college courses, remote practicum, location of foster grandparents, and problem hotlines. The uses of the EBB are limited only by one's creativity and the size of the system!

Other possible clientele

There are a number of possible networks of interest to special educators such as SpecialNet, Hex, Rural Research, and EDLINE. There are also texts dealing with the use of electronic communication media with the handicapped and the developmentally disabled. (Johansen, et al., 1981; Schooler, 1984). The EBB should not be restricted to use by a single population, e.g., special educators. If maximum impact is to be made, it should be available to all school-based users. The larger the clientele, the more likely the district will be able to solve acquisition and implementation problems.

It is well known that money is scarce in most rural school districts. Proponents of electronic bulletin boards should try to document needs and develop as much support as possible when presenting the concept to school boards.

Future possibilities for modified EBBs

Presently there are EBBs, a few services like SpecialNet which function like EBBs and the capability of local networking (Saal, 1981). In the future, we can look to more groupings such as ParentNet, Special ParentNet, (to form the base of a power group statewide), TeacherNet, ConferenceNet (a listing of all the conferences by region, state, area, and discipline), LegislativeNet (micros in the state house listing notices to legislators voicing specific concerns), and ShareNet. The EBB is already being used in urban settings on a state-wide basis (Heidelbach, 1984), on a national basis (Newman & Renfield, 1985); and internationally (Cohen & Miyake, 1985). EBBs will very likely be a wave of the future in rural service delivery. Teachers can have access to materials, experts, colleagues, etc., which are not presently available.

Other methods of accessing data, text, etc., are or will be more readily available in the future. Mainframe access to EBB and remotes for large storage and library capabilities, mixing text and video using the EBB for a wider variety of transmitted messages and materials (Borgman, 1982), and interactive video bulletin boards are three of the more exciting developments soon to be merged into the rural educator's repertoire of strategies.

In many rural settings, all handicapping conditions are low incidence as are the experts to assist those with disabilities. The EBB may be one of the solutions to bridge the gaps of geography, information and professional contact inherent in rural settings.

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Exemplary Programs

Alberta's response

The Department of Education of the Province of Alberta (Canada) recently announced the development of a new and exemplary vehicle to improve service to special needs populations in the province. The major purpose of the establishment of Response Centers is to provide a vehicle for the support of quality educational programs for all children, but with special needs addressed as a priority group. Assistance will be provided to parents, students and teachers through a systemetized process of practically designed training, program development, evaluation and research. A wide area communication system will involve traditional communication systems interfaced with microcomputer telecommunications. This network is being developed by Dr. Bob Gall of the University of Lethbridge. The project intends to have a major service component in action by September 1, 1986. Contact: Mr. Bill Lockhart, Coordinator, Alberta Education Response Centers, 6240-113 Street, Edmonton, Alberta T6H 3L2; (403) 422-6326.

Improving communication aids

The Fall, 1985 issue of *Bulletins on Science and Technology for the Handicapped* announced that the American Speech-Language-Hearing Association (ASHA) has been awarded a two year contract by the Department of Education. The project is entitled "Implementation Strategies for Improving the Use of Communication Aids in Schools Serving Handicapped Children." Ten programs will be selected to serve as model outreach sites in the U.S. for service delivery to handicapped individuals with severe expressive communication disorders. For more information about nominating a program that is exemplary in its efforts to serve handicapped, nonspeaking, nonwriting individuals, telephone the National Association for Hearing and Speech Action Helpline (800) 638-8255 (tollfree) or write to Sally W. Blackstone, Project Director, American Speech-Language-Hearing Association, 101801 Rockville Pike, Rockville, MD 20852.

Microcomputer access for the visually impaired

The Hadley School for the Blind reports that the visually impaired are now able to access microcomputers through the use of paper braille, electronic braille, Optacon, synthetic speech or large print. One paper braille device includes the use of the braille keyboard in which information in computer braille can be input or embossed. A less bulky device, electronic braille, involves reading or writing information onto cassette tapes or computer disks instead of paper braille. This also includes the use of a braille keyboard on which computer braille information can be input. The Optacon, which translates printed information into raised print, can be adapted to translate computer paper printout using the regular lens of the Optacon camera. Synthetic speech voice synthesizers may be used to transform all information received from the computer into electronically generated sounds to form words. Large print computer terminals, programs and printers are widely used for those individuals who have use of residual vision. Each device has its advantages and limitations. When considering the purchase of one of these, one must take into consideration the needs of the individual user, the cost-benefit ratio, portability and ease of use. Contact the Hadley School for the Blind; 700 Elm St.; Winnetka, IL 60093; (312) 446-8111.

New waves in Utah

After much preliminary research and development the University of Utah staff have created and implemented, for the first time, a two-way microwave telecommunications course for rural educators. This telecoursing is a means for educating rural and remote persons in central Utah. The project involved a university-based and a distance class taking the same course simultaneously. Effectiveness of the telecourse will be measured by comparing such variables as grade score achievement between the two classes. Comprehensive results will be available very soon. For more information contact Dr. Winston Egan, Iva Dene McLeary, Joan Sebastian, or Helen B. Lacey, University of Utah, 215 Milton Bennion Hall, Salt Lake City, Ut 84112; (801) 581-6079.

Problem-solving strategies

Needs	Strategies
Eliminating classroom disturbances of preservice observations	Live television broadcasts from selected public school classrooms provide a novel, highly effective mode of contemporaneous observation of classrooms. Large numbers of preservice students can be taught how to observe through a model that teaches observation techniques by lecture and readings, followed by group instruction while observing a class live, via television broadcast. This allows training of large numbers of preservice teachers, without the classroom disruptions inherent in actual classroom visits, and at a savings in time and money. Contact Mary Hoy, Iowa State University, N 119 Quadrangle, Ames, IA 50011; (515) 294-8514 for more information. Source: SpecialNet.
Collaborating with others to research rural education issues	The National Rural Education Research Consortium facilitates the quality and quantity of rural education research by linking individuals with similar research interests. The following five data banks are included in the published document, with others under development: Member profile; Research skills; Research interest; Conference; and Subject Pool. Contact: National Rural Education Research Consortium, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.
Facilitating wheelchair transport	The Barkel Carrier, which was designed and manufactured by handicapped persons, is a bumper mounted device to transport wheelchairs and to free valued car space. The Barkel carrier slides easily into a bumper plate of a car when transporting the wheelchair. Compact and sturdy, the device is maintenance free, while weatherproof covers provide protection for the chair and carrier. The manufacturers provide simple instructions for loading and releasing the carrier. For more information, contact Barkel Enterprises, Inc.; 2521 N.W. 56th Street; Oklahoma City, OK 73112; (405) 840-3150.
Reading services	Seventy communities throughout the United States now provide broadcasts of newspaper, magazine and book readings by trained volunteers for visually and physically disabled persons who cannot read printed materials for themselves. These services operate on a closed channel basis. An FM station simultaneously broadcasts the service along with its regular programming to listeners with special receivers or on an open channel basis. Local stations interrupt regular programming and special equipment is not required. Information on these services and on how to establish similar services is available from The Association of Radio Reading Services, P.O. Box 847, Lawrence, KS 66044; (913) 864-4600.
Accessing and registering hardware and software	The National Rural Education Research Consortium facilitates the quality and quantity of rural education research by linking individuals with similar research interests. It provides data banks of resources. The following five data banks are included in the published document, with other data banks under development: Member profile; Research skills; Research interest; Conference; and Subject Pool. Contact: National Rural Education Research Consortium, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

Technologies to solve rural special education problems

Doris Helge, Director
National Rural Development Institute
Western Washington University

Modern technology offers particular benefits for rural schools. Many of the most frequently identified rural service delivery problems (e.g., professional isolation and long distances between services and those needing them) can be partially ameliorated by the increased use of advanced technologies.

Rural schools have had less access to most forms of educational technology than nonrural schools (McCormick, 1983). The smallest and most isolated rural schools can potentially gain the most from the current technological flurry.

Availability and use of emerging technologies

A 1983 National Rural Project study (Helge, 1983) of 200 rural districts/cooperatives representative of the United States showed that a preponderance of rural school systems have at least one type of electronic technology available to them. Although most rural schools have had some type of technology (e.g., audio tapes, radio, instructional television, two-way TV, and teletype) for years, this study was primarily concerned with emerging electronic technologies. Microcomputers were most common, as indicated in Table 1.

States with the lowest levels of accessibility were in the deep South. In addition, a disproportionate number of Bureau of Indian Affairs school system respondents stated their schools had no technology available.

Even though 88% of those interviewed had at least one microcomputer in their district, a surprisingly low percentage, only 18%, were linking these computers with telecommunications systems. Interactive applications of videodiscs and microcomputers were just beginning to be investigated. Satellites were primarily used in remote areas surrounded by vast land areas with sparse populations.

Due to cost factors, microcomputers were more popular in rural schools than were mainframes. Respondents said their rural districts/cooperatives could afford microcomputers, but couldn't afford mainframe or minicomputers. Microcomputers were compatible with and accessible to isolated locations. Some teamed their microcomputer with a university or state education agency mainframe or a mini-computer via a modem.

The primary uses of technology identified were as follows: instructional support and application, 72%, managerial applications, 42%, inservice, 8%. Instructional uses ranged from computer-assisted instruction via microcomputer to satellite-based instruction. Managerial uses by administrators varied from information retrieval to decision making and report generation. Inservice uses ranged from didactic to interactive.

TABLE 1

Types of technology available to rural districts/cooperatives surveyed:

Type of Technology	Percent
Microcomputers	88
Videodiscs	19
Telecommunications	18
Satellite communications	2
Other (voice synthesizer, specialized phone equipment, etc.)	21
None	12

Problem-solving uses of technology

Instructional support

Availability of learning technologies limits the need for teacher specialization and permits instructors to spend more of their time teaching basic skills or supervising individualized study. Technology can also assist in overcoming isolation from urban cultural institutions; music, plays, and other art forms can be transmitted electronically.

A great deal of software is appearing for testing procedures, including individual "on-line" testing and rapid scoring/interpretation. Consistent curricula can then be developed using capabilities of word processing software.

Library materials and searches are also accessible through global information and dissemination systems such as the Source or CompuServe. Resource and information systems, statewide telecommunications systems, and global electronic communication systems increase knowledge regarding service options for rural handicapped children. They also allow personal conversations among rural special educators regarding daily problems and successful strategies.

Small schools can now afford to access centralized mainframe programs for monitoring schedules and follow-through aspects of student reports. Agencies are also now electronically exchanging nonconfidential diagnostic and progress reports. This ability to collaborate on service delivery on an as-needed basis is preferable to rural school consolidation.

Unique support systems are also being generated among remote rural families having children with similar disabilities. These families are developing the capacity to compare service delivery effectiveness, home teaching, and availability of resources. This approach does not always require the assistance of school personnel.

Similarly, communication between service providers and families is being strengthened via technology. Typically, it means exchanging videotapes among remotely located families and specialists.

Instructional applications

Computer-assisted instruction (CAI) — including drill and practice, tutorial, simulation modeling, problem analysis, and instructional game possibilities — has the advantage of being interactive. The computer assumes a direct instructional role leaving more time for actual teaching. This is of tremendous benefit in understaffed rural school systems.

One- or two-way instructional television also offers more diverse instructional alternatives, as do satellite-based delivery systems such as the Appalachia Community Service Network.

Mobile vans with specialized electronic equipment are becoming more frequent as a way to reach students in remote locations whose school systems lack either full-time teaching specialists or extraordinary equipment. The vans may have a diagnostic and prescriptive focus or carry mobile electronic curricula.

Many disabled students are personally accessing national telecommunications systems to obtain service or instructional information. Many specialized pupil services, including vocational guidance and academic diagnostic and prescriptive activities, are now computerized. These assist in developing realistic career alternatives for students with disabilities.

Management tools

Computer-managed instruction (CMI) offers a method of administering/evaluating tests, keeping records, and making decisions. CMI software is also designed to support the instructional system and provide diagnostic feedback regarding student performance.

It is possible for most rural districts to generate reports for local or state requirements. Alaska has a system of developing interface capabilities for exchanging data and updating student files across the state. This type of network enables direct computer-to-computer transfer of student-related, budgetary, and other types of information, creating more accurate record-keeping. This is particularly useful for administrators handling large geographic areas.

Cooperatives/districts have been able to retain specialists such as an intinerant low-incidence teacher or a teacher of rural gifted children (Helge, 1983), by sharing that person with other districts via instructional technology. Isolated special educators who can frequently communicate with those in similar circumstances feel much less professionally isolated. With the added personal benefits of electronically secured cultural resources, many rural personnel who might otherwise leave remote areas do not.

Staff development applications

While didactic staff development sessions can be helpful and are often all that is feasible, interactive sessions can frequently be arranged for distant locations via two-way television or satellite transmission. As a valuable follow-up or staff development activity, videodiscs of an educator's strategies with low-incidence handicapping conditions can be mailed to a specialist/consultant for feedback.

Implementation problems

State of the art

A primary problem for special educators is that few technology designers, especially computer programmers, have had knowledge of special education. Many well-composed programs have been poorly suited to classroom use for integration with existing curricula.

Even fewer programmers have understood rural issues. Communications among developers and potential users have generally been poor. Confusion and some differential pricing have been caused by the myriad of vendors in the field. Sales organizations have confounded this problem by a lack of follow-up or servicing after installation.

Incompatible microcomputer or videodisc player equipment and the inability to copy videodisc software are frequently problems. Software incompatibility has prohibited sharing of data bases. Ownership (copyright) guidelines, particularly for satellite receptions, are not yet clear. FCC regulations have not necessarily been developed to fit the rural school situation.

Problems also exist with direct-access computing systems. Direct access systems are those used directly by special education personnel via microcomputer or a terminal connected to a time-shared computer. These systems are usually less expensive than mainframe systems, but they require staff training. Disadvantages include downtime due to "crashes" during peak use, problems over priorities of usage, and associated expenses such as long distance charges.

Fiscal inadequacies

The greatest share of the total costs have been associated with the front-end acquisition of hardware and software. These are often underestimated. Rental of telecommunications lines and long distance charges also represent major costs and appear to be increasing.

Ongoing costs are difficult to predict. Much of the equipment is new and its "useful life" and track record have not yet been determined. Some equipment costs vary greatly because new and better products are developed daily. Many

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innovations may take years to be acquired by schools because of their initial expense.

Initial costs, originally perceived to be high by school boards, are later seen as minimal compared to benefits being received. However, initial costs for developmental time frequently are overrun. There are difficulties in finding experts to assist with computer usage and programming (Helge, 1983). Rural schools are now becoming aware of monetary needs for staff training, as well.

Staff development needs

Complaints about the use of new technologies have included the following: staff illiteracy and apprehension; personnel needed for training others; staff resistance to procedural changes; human error factors; and unrealistic expectations. Rural schools frequently have inadequate staff development programs. Staff training is particularly difficult in rural America, where personnel attrition rates of 40% are not uncommon.

Parent or community attitudes

Rural communities value tradition and direct personal contact. Technology is often perceived as an alien influence. Gaining parent and community acceptance — through their involvement via technology — is essential. Parent/community attitudes cannot be neglected.

Suggestions for initiating use of new technologies

Seek external financial aid. It is time to make known to corporations, private foundations, and community organizations the inequities in the availability of technologies for rural schools. Approaching corporations that produce rural-focused commodities should be a first step. Although most foundations are not rural-focused, they would value the fact that a rural school system had been able to obtain "seed money" from corporations or local community organizations.

Computer corporations should understand that the rural school system values donations not only of hardware, but also of software or staff training time and resources. Potential tax deductions and visibility for the corporation should be stressed. Local businesses or civic organizations may be interested in donating or sharing equipment or staff training expertise.

Consider local rural culture and norms. The "high tech high touch" approach described by Naisbitt (1983) involves personalizing the use of new technologies. Some of the more successful rural technological innovations have been designed to use existing rural grapevines or to increase the "high touch" approach of rural neighbor helping neighbor.

Create community understanding and support. Offering hands-on evidence of technology utilization will usually result in a high degree of student feedback and parent acceptance (e.g., a computer printout taken home to share with parents). School personnel should make special efforts to educate their rural community regarding such positive implications as potential student employment in "information society" jobs and the concrete results in instructional effectiveness and student change resulting from implementation of advanced technologies.

Involve teachers in planning processes. The adept rural administrator will involve teachers in planning and development. Continued local enthusiasm for implementation is often due to the efforts of an individual teacher advocate whose support should be cultivated. Administrative and school board advocates are also helpful.

Organizing an interested and enthusiastic staff group will help determine what cognitive and affective approaches are needed for acceptance and use. This group will want to seek advice from other rural practitioners using the same technology before adopting or adapting it for the school system. The assistance of related state and national agencies dedicated to the use of technology should also be sought. Technologies selected for implementation should be flexible, use existing equipment capabilities, be "user friendly," and permit sharing of data bases.

It is wise to begin on a small scale and ensure that success will be reported by the highly efficient rural grapevine. Likewise, flexibility in planning, implementation, and maintenance strategies is essential.

Fragmentary approaches to curriculum development in introducing technologies should be avoided. Implementation should be a school- or district-wide effort, and part of the regular learning situation rather than a "pull-out" activity.

Build staff skills. Staff training must stress that technologies can be used effectively to supplement, not supplant, the efforts of rural teachers. Because most rural teachers derive their job reinforcements from positive interactions with students, training must emphasize that technologies do not substitute for teacher-student interaction. Rural schools should also express their inservice and preservice training needs to university preparation programs.

Ensure student participation. Student participation will be enhanced if technologies are readily available in the classroom or associated with greater student scheduling flexibility. Extensive efforts should be made to teach students the immediate and career opportunities available through technologies.

Successful models

The following examples of successful uses of technology were developed in a variety of rural settings and with diverse groups of individuals for such purposes as direct instruction, instructional support, management, and staff development.

Obtaining service delivery information

The Rural Bulletin Board is administered by the American Council on Rural Special Education (ACRES). This bulletin board is part of the SpecialNet telecommunication system operated by the National Association of State Directors of Special Education.

The Bulletin Board provides information specific to rural special education about conferences, successful practices in specific rural subcultures, rural job referral services, federal and state policies, the ACRES Resource Network, and recent publications. Readers are encouraged to use its electronic mail capabilities to communicate directly with other users.

Instructional programming information

The North Slope Borough School District of Alaska used a computer-assisted management system to organize programming and development of the IEP and other reports.

District administrators developed programs that linked many IEP goal/objective statements to assessment instruments. This provided a criterion-referenced inventory of performance analysis on more than 200 key skills in reading and math. Content areas also ranged from study skills to sensory perception skills.

Gathering data for prescriptive programming

A Head Start program in Otsego County, New York, uses videotapes in which children from remote areas react to a structured sequence of situations. The videotapes are sent to and viewed by staff at a more centralized rural facility. Their input is used by local personnel for planning prescriptive programming and for locating agencies which can best provide appropriate services. The tapes become a permanent part of the children's records against which subsequent recordings are compared. Testing in a home-school situation eliminates clinical aspects which often affect performance.

Parent training

During a four-day residential workshop in a program in Newfoundland, remotely located parents of children with hearing impairments view teaching videotapes. Training videotapes are later sent to the families on a monthly basis for use with their loaned videotape playback units. An auditory trainer is also furnished to parents for use at least once per day in one-to-one language teaching sessions with children.

A visiting teacher went to each home only once per semester and conducted weekly telephone counseling sessions with parents. Considerable improvement was noted in parent and child behavior.

Parent communication

Where telecommunications are prohibitive due to costs or other factors, other technology is available. Strategic placement of C.B. radios was an inexpensive, quick-access, and reliable approach to communicating with parents in rural Appalachian "hollers" that are hard to reach because of their terrain.

Increasing curricular offerings

A high school in Littlefork, Minnesota, facing a decline in quality because of dwindling school population, inflation, and fewer resources, designed a system offering 178 courses to 78 high school students. Computer courses, correspondence courses, audiovisual resources, and videotape recorders were combined to make one curriculum package.

The district set aside a classroom in the high school for its "one-room schoolhouse" and equipped it with study carrels, computers, and other electronics. A manager used diagnostic records, counseling, contracts, and other student learning devices. Individualized learning goals and styles were emphasized. Cost per hour for such a computer-taught course was estimated to be $5.49. Discipline problems have been exceptionally low because of a high level of student motivation.

Saving staff costs/labor intensity

The need to reduce the numbers of professional personnel required was the initiative for a short-staffed remotely located learning center relying heavily on the use of technological media and programmed instruction. A model designed by Willett and Swanson (1979) used ten learning areas of individualized instruction for 1200 rural students.

Each learning area corresponded to subject matter and was supervised by a resource specialist or a special service teacher. A teacher-senior for diagnoses and curriculum supervision and an administrator completed the professional staff of 12 for this learning center. Local paraprofessional personnel included 18 adults and 22 students. Staff reduction paid for a large portion of necessary technological and other media, and the model was judged cost efficient.

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Instant communication/feedback

Telecommunication systems allow administrators located great distances from the site of IEP meetings to participate in case conferences without being physically present.

Housed at Eastern Montana College, a state-wide audio teleconferencing network interconnects 47 sites with educational resources in isolated, rural areas of Montana. The system uses live interactive audio with occasional computer networking to provide programming to small, rural, educational institutions across the state.

Educational offerings are available at all levels. Statewide educational meetings held using this system eliminate expensive and time-consuming travel. Electronic mail systems have enabled the agency delivering services and its supportive/monitoring agency to communicate instantly regarding problems, potential resources, and so forth.

Allowing students to stay in their communities

For years, the small populations of school-aged children in Alaska made it necessary for many communities to send their special needs and high school students to larger communities for instruction. Now, satellite instruction to remote communities has enabled many Alaskan students to stay in their home communities. A continuum of services has been designed ranging from totally home-based education to short-term or long-term boarding school instruction.

Serving homebound students

Homebound students may be served via telecommunications through a telephone hookup in the child's home. A television placed in the student's home can receive educational programs designed/produced by the state or district. Alternatively, the classroom setting can be broadcast to the home.

Challenging gifted students

The advanced studies of 8 to 12-year-old gifted students at Calhoun County High School in Grantsville, West Virginia, included introduction to computers and programming, telecommunications systems, and programmed instruction. Project REACH (Raising Educational Achievement by Changing Horizons) includes a supervisor for special education and a teacher/program facilitator as sources of support.

Summary

Technological equipment, information, experience, and expertise offer tremendous potential for rural administrators, educators, and disabled students. The use of modern technology assists in overcoming serious service delivery problems associated with sparse populations, scarce resources, and difficult terrain. Rural school and related agency networking has already rapidly increased, and numerous interagency agreements to share equipment among rural areas have emerged.

Technology can strengthen ties between rural communities and schools. In fact, it can actually assist rural schools in shattering the stereotypes of stagnant rural communities and school systems. The potential for application of emerging technologies is limited solely by the imagination of those planning and implementing them.

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McCormick, F.C. (1983). *A guide on successful uses of technology in rural schools.* St. Paul, MN: Educational Operations Concepts.

Naisbitt, J. (1983). *Megatrends: Ten new directions transforming our lives.* New York, NY: Warner Books.

Willett, E.J., Swanson, A.D., & Nelson, E.A. (1979). *Modernizing the little red schools. The economics of improved education.* Englewood Cliffs, NJ: Educational Technology Publications. RSEQ

Technology at work

Computers and related technology have the potential to remove many of the barriers faced daily by disabled individuals. Computers to Help People, Inc. (CHPI) is a nonprofit organization founded in 1981 to insure that this potential is realized.

The primary goal of CHPI is to provide information, training and resources that allow disabled individuals better opportunities to use technology in order to enhance various facets of their lives.

CHPI is currently involved in research and development, production of software, collaboration with similarly involved agencies, and the provision of training and support to those already using technology in the workplace.

CHPI plans to expand into the area of electronic publishing, providing assistance to those not able to manipulate more conventional paper sources.

Eventually, CHPI hopes to be staffed entirely by employees with disabilities; a self-supporting corporation staffed by self-supporting employees.

For further information on CHPI or for receipt of their software catalogue, contact: Computers to Help People, Inc., 1221 West Johnson Street, Madison, Wisconsin 53715; (608) 257- 5917.

Computer-assisted rural projects, 1983-1985

Barbara L. Bowen, Program Director
Apple education affairs grants

as presented at
The 1985 National Rural Teacher Education Conference
Western Washington University

Gifted science students' computer network in fourteen rural Appalachian schools

The use of a microcomputer network meets an instructional need of rural, isolated schools which is difficult or impossible to meet in other ways. An example of such a program is the use of microcomputers and modems to connect the science classrooms of 14 small rural schools with one another and with Western Carolina University (WCU). This network unites schools within a "scientific community" and provides enrichment activities for students and a support system for teachers.

Two of the primary uses are Bioquiz and Chemquiz. Questions and problems called Bioquiz and Chemquiz are put on the network by staff at WCU. Students respond to the questions on line, often working in pairs or teams. Other students at several high schools are involved in networked research projects — an acid rain project and a joint project between North Carolina Wildlife Resource Commission and WCU Micronet.

The major impact and success of the Micronet Project is the continued growth of interest and enthusiasm it has created in the students. At least one class will be creating a "Special Projects" curriculum for next year to accommodate the growing number of students who desire to be involved in the project. It has provided a source of learning not only for the gifted and talented, but also for the average and remedial student.

Other uses of the project computers include keeping informed of upcoming meetings, seminars, workshops, etc. through the electronic mail and "meetings" file. The computers have also been used to obtain textbook selection information from other science teachers.

Micronet has not only provided rural teachers contact with the scientific community, but has done so very effectively. Micronet has become a prime resource for successfully overcoming rural isolation and geographic barriers.

For more information, contact Micronet Project Coordinator, Dr. Roger Bacon, Chemistry Dept., Western Carolina University, Cullowee, N.C. 28723; (704) 586-8399.

Writing teachers' microcomputer-based communications network

Microcomputers were used to establish an electronic network of rural writing teachers in five states: Maine, North Dakota, North Carolina, Vermont, and Wisconsin. The benefits of such a network which encourages both the improvement of poor writing skills, joint problem solving, and cooperative work by students and teachers were documented. Several unexpected results of computer use have emerged. Students collaborate in preparing case studies. They transmit their compositions to students in other classrooms across the country. At least one student has experimented with invisible screen writing and found that it freed her up to write a difficult personal narrative. Peer teaching is increasing with the development of more competent classmates. More concern has evolved toward the production of higher quality, detailed and informative writing. Students seem to be willing and able to do these things because subsequent drafts are far less arduous at the word processor than with a pencil.

For more information, contact Professor Paul Cubeta, Breadloaf Writing School, Middlebury, VT 05753; (802) 388-3711.

Speaking graphically in Indian languages

This project created a phonetic, computer orthography on a Macintosh computer which will be used to aid the oral language of some American Indians in making the transition to bilingual literacy. A bilingual dictionary of natural history will be developed by 12 university bilingual teacher credential candidates under the supervision of project staff and implemented in public school classrooms where over 500 children are enrolled in bilingual classes in Hupa/English, Yurok/English, Karuk/English and Tolowa/English. University and public school staff will work closely with tribal bilingual teachers in the pre- and posttesting of elementary school students.

Active dissemination through a national communication network will make bilingual teaching methods, tutorial diskettes, and computer curriculum guides available to teachers and other personnel in educational communities. Diskettes will include a dictionary of terms for animals, plants and environments utilizing the unique graphic capabilities of the Macintosh.

Contact Dr. Ruth Bennett, Bilingual Education, Humboldt State University, Arcata, CA 95521 for more information.

Preschool computer program in an American Indian community

The rural Indian reservation is characterized by a distinct and geographically isolated cultural community. Major factors include the differences found in language and world view concepts. Ordinarily, Indian children are first exposed to outside concepts and values when they enter school. The

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goal of this project is to adapt the preschool educational environment of American Indian (Pueblo) children to their cultural background.

The key results expected through this project are the translation of abstract concepts using microcomputers for American Indian preschoolers in the classroom through the development of locally relevant educational materials. The main focus is to employ microcomputer technology as a bridge between the cultural education of preschool American Indian children and the nontraditional education of the Anglo-dominated American society.

Contact: Edwina Abeita, Native American Studies, University of New Mexico, 1812 Las Lomas Drive, NE, Albuquerque, NM 87131.

English fluency via computers

This project uses computer-assisted writing to help a rural, multicultural student population improve English writing skills. The writing and information environment of microcomputers offers a promising new learning approach to Native American high school students and beginning college students who struggle with nonstandard usage and grammar. These students use computer-assisted writing to improve English skills and the development, elaboration and sequencing of written ideas. Two key themes which underlie this project are reducing students' fears of failure and encouraging elaboration of writing.

According to the anecdotal report of one teacher, the writing of those students who made use of the computer grew much more than those who were relying on handwriting and typing. Not only did the computers provide a tool that made good writing easier (due to the ease of revision), but it also helped the students become more aware of the interrelationship/interapplicability of subject areas.

Another teacher theorized that the fact that word processing made it mechanically easier for the students to write has had a positive therapeutic effect in that they are able to more easily express their feelings about themselves and others.

To gain more information about this project with the Yakima Tribal School/Zillah High School/Heritage College Microcomputer, contact Diane Fairbanks, Heritage College, Fort Road at McKinley, Toppenish, WA 98948; (502) 865-2244.

Computerized marine ecology in the Florida Keys

The foundation of this project is the creation of a Marine Ecology Data Base which will provide the framework for active participation in field experiences merged with the application of computer technology. Data collected and entered in the data base will be synthesized using data base, word processing and spreadsheet applications to express the outcomes of research and experiments. From the results, the teachers will develop curriculum materials for use in 4th to 6th grade classes.

For more information contact Chris Yahn, Project Coordinator, Stanley Switlik Elementary School, 3400 Overseas Hwy., Marathon, FL 33050.

Intercultural network for learning

This project has established an international network of computer mediated communication among junior high and university undergraduate students from different cultures. Students interact via microcomputers and telephone lines and participate in an international news network and socio-cultural surveys. The focus is on cooperative learning across linguistic and cultural boundaries. Problem solving tasks and more extensive socio-cultural surveys will be posed to network paricipants in order to invesitgate the problems of communication and mutual understanding across cultural and linguistic boundaries.

This network connected the University of California, San Diego with schools in Escondido, California; Tijuana, Mexico; Jerusalem, Israel; Tokyo, Japan and Juneau, Alaska. Many exchanges focused on gathering opinions from other sites about one's own cultural impact on the other culture.

The electronic mail system using microcomputers offers an unlimited amount of time for receiving and creating messages off line, while, once the message has been prepared, the transmission itself can take place almost instantaneously. It currently costs about one-third of the equivalent telephone communication.

Further information on the Intercultural Network can be obtained by contacting Dr. Margaret Riel, Interactive Technology Lab., University of California, San Diego, La Jolla, CA 92903; (619) 452-2957.

Developing data base inquiry skills: an interdistrict project

To promote higher level thinking and reasoning skills, this project used computers as an inquiry tool in an interdistrict team project to construct a regional history data base with regular grade seven social studies students. This process-oriented project also included intensive monthly teacher inservicing and an on-line bulletin board for sharing resources and materials.

The telecommunications aspect enables students and teachers of these small, rural, geographically dispersed schools to work together. For more information on this project, contact Janet Parker, Early and Middle Childhood Education, University of Louisville, School of Education, Louisville, KY 40292. RSEQ

READING-FREE Vocational Interest Inventory (R-FVII)

REVISED EDITION

For more information, write to:

EP **ELBERN PUBLICATIONS**
Order Services Center
P. O. Box 09497
Columbus, Ohio 43209

A picture interest inventory that does not discriminate against persons with reading problems. Developed for use with mentally retarded and learning disabled persons from age 13 to adult.

The Inventory measures vocational preference in 11 interest clusters using 165 artist-drawn pictures of occupational significance. Each subject's vocational preferences are recorded on an Individual Profile Sheet (IPS) showing high, average, and low interest on each cluster — Automotive, Building Trades, Clerical, Animal Care, Food Service, Patient Care, Horticulture, Housekeeping, Personal Service, Laundry and Materials Handling.

Ten separate normed distributions by type of handicap, age, IQ, and sex. Norms for EMR, LD, and TMR individuals are reported in the Manual. Easy to administer & score.

Plus the *New* **Occupational Title Lists** (OTL) which aids vocational evaluators in selecting practical jobs for clients based on their R-FVII scores. A total of 698 job titles are listed in the OTL using information from the *Dictionary of Occupational Titles*.

SpecialNet

A resource that has gained continued popularity in the special education field is SpecialNet. SpecialNet is a Bulletin Board System which, through computer modem-telephone connection, exchanges information with its users. Particularly noteworthy is the bulletin board called RURAL, which deals specifically with rural issues and information. The boon to the rural special educator is that specific, up-to-date information is no longer miles or days away, but is instantly available literally at the press of keyboard buttons. Not only can information be retrieved through this system, but it can also be sought; the user may leave a message or request for information for specific users or users across the continent. The time 'on line' takes less time than a phone call, and is therefore less expensive. SpecialNet provides a manual for its use with various software packages. More specific information on setting up your organization for SpecialNet and other information networks is found elsewhere in this edition. For more information, contact: SpecialNet, National Systems Management, Inc., 2021 K Street, N.W., Suite 315, Washington, D.C. 20006; (202) 296-1800.

Job placement assistance

A data base has been developed by the Job Accommodation Network (JAN). This is a national information network and consulting service for employers who want to hire or retain qualified workers. It brings together information from many sources about practical ways of making accommodations for employees and applicants with disabilities.

When you are considering accommodating an individual with a disability, call 1-800-JAN-PCEH. A Human Factors Consultant will discuss your concerns. The computer will then be searched for information based on these facts: the functional requirements of the specific job, the functional limitations of the worker, environmental factors, and other pertinent information.

For more information about JAN, Phone 1 (800) JAN-PCEH (526-7234) outside West Virginia or 1 (800) JAN-INWV (526-4698) inside West Virginia. Source: SpecialNet.

Events

Exposition '86: Innovative Programs, Research and Technologies in Rural Education

October 7-10, 1986
Bellingham, Washington
(please see inside back cover)

Perspectives on bilingualism: 1986

June 9, 1986
New York

The Bilingual Developmental Psychology Ph.D. Program, Ferkauf Graduate School of Psychology, Yeshiva University, and the New York Bilingual Education Multifunctional Support Center (Hunter College, CUNY, and Teachers College, Columbia University) will sponsor their fifth annual one-day invitational conference on June 9, 1986, under the general title "Perspectives on Bilingualism". This year's conference will be devoted to the topic "International and Cross-Cultural Perspectives". The program is now being planned and will consist of invited papers only. For information concerning participation and attendance, please contact: Professor Joshua A. Fishman; Ferkauf Graduate School of Psychology; Yeshiva University; 1165 Morris Park Avenue; Bronx, NY 10461; (212) 430-2370 or (212) 430-4201.

Issues concerning mental retardation

October 23-25, 1986
Omaha, Nebraska

The Association for Retarded Citizens of the United States, the nation's largest volunteer organization devoted to issues concerning mental retardation, will have its 37th annual national convention in Omaha, Nebraska, Oct. 23-25, 1986. The 1986 convention will be sponsored by ARC-Greater Omaha and will be convened at the Holiday Inn Central in Omaha. The ARC has more than 160,000 members represented by 1,300 state and local chapters across the country. For more information about the 1986 national convention, contact: Jim McKenna, ARC of the United States; 2501 Avenue J; Arlington, TX 76006; (817) 640-0204.

New technologies for the hearing impaired

June 27-July 1, 1986
Chicago, Illinois

Contact: Dr. Donna Dickman at the Bell Association, 3417 Volta Place NW, Washington, DC 20007-2778; (202) 337-3220 (voice/TDD).

Paraprofessional training and employment

May 1-3, 1986
Colorado Springs, Colorado

The fifth national conference on the training and employment of paraprofessionals in special education, vocational and rehabilitation service programs for children and adults with disabilities will be held in Colorado Springs, Colorado, May 1 - 3, 1986.

Especially in rural areas where professional special educators are difficult to obtain and retain, policy makers have turned to paraprofessional workers as a method to supplement programmatic and administrative functions of teachers. Training and supervision have not kept pace with the demand for paraprofessionals. This conference will bring together administrators, directors of staff development, college representatives, and others concerned with the training of paraprofessionals to share information and expertise. For more information please contact Anna Lou Pickett, Director, National Resource Center of Paraprofessionals in Special Education, CASE/CUNY Graduate Center, 33 West 42nd Street, New York, NY 10036; (212) 840-1278.

Closing the Gap

October 22-26, 1986
Minneapolis, Minnesota

The fourth annual Computer Technology for the Handicapped international conference will bring together handicapped individuals, their families and friends, producers of technology and special education, rehabilitation and medical professionals from around the world. More than 120 presentations examining ways in which technology can help fulfill the promise of independence will be offered to registered participants. Additional information regarding the conference and the Closing The Gap summer series can be obtained from: Closing the Gap, P.O. Box 68, Henderson, MN 56044; (612) 248-3294.

Erratum

Please note an inadvertent error on the part of the editorial staff regarding the article entitled "Problems facing the Indian child in rural settings: a case for Indian advocacy", pages 22-23, volume 6, number 2. This article was coauthored by U.Steucher, Department of Psychology and Mental Health; W. Baeumler and N. Hakala, Department of Sociology and Anthropology, all from the University of Minnesota, Duluth, Minnesota.

PLAN NOW TO ATTEND . . .

Exposition '86: Innovative Programs, Research and Technologies in Rural Education

Bellingham, Washington • October 7-10, 1986

Hosted by: National Rural Teacher Education Consortium and the National Rural and Small Schools Consortium, Western Washington University, Bellingham, Washington

This conference will explore innovative programs, research, and technologies in rural education. Rural preservice and inservice strategies will constitute major conference strands. Participants will include rural public school professionals, university deans and faculty, school board members, parents, and other individuals from agencies and organizations related to rural education.

Networking will be facilitated through job-alike sharing sessions, expansion of the National Rural and Small Schools Consortium, the National Rural Teacher Education Consortium, the National Rural Education Research Consortium, and the exploration of partnerships with such groups as county extension agencies and volunteer rural service organizations.

This conference is being sponsored by

- the National Rural Development Institute,
- the American Association of Colleges for Teacher Education,
- the National Education Association,
- the American Occupational Therapy Association, Inc.,
- the National Association of School Psychologists,
- the National Association of Secondary School Principals,
- the National Association of Elementary School Principals,
- and the American Association of State Colleges and Universities.

Exposition '86 will be keynoted by a representative of the Secretary's Office of the U.S. Department of Education and representatives of the U.S. House and Senate. Presentations will be accepted for a variety of formats including general and small group sessions, individualized learning centers, product demonstrations, and roundtable discussion groups.

Papers are solicited in the following areas until June 15, 1986:

- Inservice training models
- Preservice preparation models
- Rural school curricula
- International and comparative perspectives
- Teacher induction programs
- Accreditation/certification: issues and strategies
- Practicum and internship strategies for quality personnel preparation
- Collaborative partnerships
- Technologies: processes and products
- Nontraditional adult learner programs and activities
- Cross-cultural educational services
- Ensuring quality personnel: from recruitment to retention
- Research and evaluation
- Administrative issues
- Recreation and leisure
- Abuse, neglect, crisis and suicide intervention
- Vocational/technical education
- Resources and funding
- Legal and ethical issues
- School board practices

For further information, contact the National Rural Development Institute, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

RSEQ

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Rural Special Education Quarterly

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The *Rural Special Education Quarterly* is produced by the National Rural Development Institute and is the only national scholarly publication solely devoted to rural special education issues. The purpose of the *Quarterly* is to provide articles concerning federal and other events relevant to rural individuals with disabilities, progressive service delivery systems, reviews of relevant conferences and publications, and sources for rural special educators. The publisher cannot accept responsibility for the correctness of information supplied to our office or for opinions expressed. The mention of commercial products, their sources, or their use in connection with material reported herein is not to be construed as either an actual or implied endorsement of such products by the *Rural Special Educational Quarterly*, its affiliates or sponsors.

Guidelines for submission of articles

Authors wishing to submit articles are advised to refer to the announcement below. Articles for publication should focus on identified service delivery problems, applied theory/research, or practical field-tested solutions. Persons reviewing articles value practical problem-solving approaches, particularly those in which the writer can give concrete examples of viable strategies and/or locations of exemplary programs. The editor is also pleased to receive short vignettes which note a resource available or an exemplary program, and a person who may be contacted for additional information. Articles which have not been previously published, and which are not under review by other publications are welcomed. They should be limited to 10 double-spaced pages or less and should follow the format of the *Publication Manual of the American Psychological Association*, 1983 edition. The receipt of each article is promptly acknowledged. A detachable cover page to facilitate blind review should include the full name(s), degree(s), and professional affiliations of the author(s), as well as a return mailing address of the principal author. The field review process takes approximately three months. The editors reserve the right to make necessary editorial changes which do not affect the meaning of the manuscript.

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RSEQ is now accepting papers for future publications on the following topical areas regarding rural service delivery: speech/hearing impaired, cross cultural, behavioral disorders, and gifted.

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Provision of special education services to rural children and youth with disabilities: the OSERS perspective

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Washington, D.C.

The Office of Special Education and Rehabilitative Services (OSERS) has as its major priority the provision of comprehensive educational services to all handicapped children, whether they reside in urban or rural areas. The OSERS programs are grounded in law, specifically the Education of the Handicapped Act (PL 94-142), and the 1983 amendments to that act (PL 98-199). This legislative base provides that all handicapped children have a right to a free, appropriate public education. It calls for means to assure that the rights of handicapped children and their parents are protected, and that states and localities are assisted in their efforts to provide a quality education for these children.

The core concept for the provision of education services to handicapped children and youth has been that of "the least restrictive environment" (LRE). LRE entails the integration of disabled students with their non-disabled peers in order to assist them in achieving maximum involvement in the educational, vocational, and social fabric of American life. Only an "educationally compelling" reason can remove a child from a regular classroom. Related services must be provided to ensure that, unless exceptional disruption occurs, the child stays with his nondisabled classmates. In addition, education should be provided for the child in a setting as close to home as possible, preferably in the school the child would attend if not handicapped. The law also provides a strong role for parents in decision making about their children through the co-development with education professionals and providers of related services of individualized education plans (IEPs). Fulfilling the mandate of this law provides particular challenges to rural special educators because of the unique aspects of rural life.

Since the passage of PL 94-142, the problems that have been encountered in providing special education and related services to handicapped children and youth in rural areas have been well documented. Although substantial progress has been made to provide appropriate educational services to disabled individuals in rural areas, service delivery problems remain. A review of the many journal articles, documents and reports concerning rural special education consistently identifies at least seven major problems, which OSERS is trying to address:

- The absence of a consistently applied definition of "rural"
- Difficulties in recruiting qualified staff
- Difficulties in retaining qualified staff
- Adequate preservice training needs
- Appropriate inservice training needs
- Effective service delivery
- Gaps in research.

Many Federal agencies collect data on rural populations, yet a consensus on the definition of "rural" is lacking. Because agencies use different definitions, it is difficult to compare rural and urban school districts and the services they provide. One working definition of "rural" used by the National Rural Project (NRP) in its research conducted between 1978-84 is:

> A district is considered rural when the number of inhabitants is fewer than 150 per square mile or when located in counties with 60 percent or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a standard metropolitan statistical area (SMSA), as determined by the U.S. Census Bureau, are not considered rural (Helge, 1981).

The research collected by the NRP using the above definition was funded by OSERS, and this information has helped to provide a better statistical base for the provision of services to individuals with handicaps in rural, remote areas.

Recruitment for positions in rural areas is an acute problem. Factors identified by the literature since 1980 relative to recruitment problems include isolation, social deprivation, poor housing, poor pay, and the frequent need for extensive travel. A 1984 survey by the NRP of 100 geographically representative rural special education administrators indicated that these recruitment and retention factors remain a problem in attracting highly qualified candidates (Helge, 1984).

While systematic studies of annual turnover of attrition rates of special education or rehabilitation personnel have not been conducted, retention of qualified personnel remains a problem. An OSERS-funded study found instances in which the special education staff of entire rural districts leave after one school year (i.e., occasions of 100 percent attrition), or in less than one school year. Attrition rates as high as 40-50 percent are not uncommon (Helge, 1984, 1981; Smith-Davis, Burke, & Noel, 1984).

In January, 1983, OSERS funded an NRP telephone survey to gather information from 200 special education administrators in 200 rural local school systems and cooperatives in all fifty states. Sixty-four percent of the respondents indicated that retaining qualified staff was a major problem in serving handicapped students in rural areas (Helge, 1984).

The discussion of staff recruitment and retention points out some of the difficulties posed by remote, isolated rural areas in providing special education services. It is not only a case of providing adequate numbers of professionals, but a case of preparing adequate numbers of individuals who are willing and capable of serving handicapped children and youth in localities which impose particular disincentives to effective service delivery.

Preservice teacher preparation programs serving rural areas identify those characteristics unique to rural settings and adjust coursework, practica and related experiences to accommodate the diverse roles and relationships the professional will encounter. For example, a typical rural area might

continued . . .

have a heterogeneous rather than a homogeneous grouping of children with a range of handicapping conditions, severities, and combinations. The special educator might be involved in the delivery of special education and related services in collaboratives which offer the opportunity for cost savings via shared staff, services and accountability, and in a setting where members of the professional community meet together to discuss shared problems and involve the community in decision making.

Inservice training is a critical issue which has an important implication with regard to retention and effective service delivery. The special education teacher in rural areas is the main conveyor of best practices in such areas as special education, vocational education, infant education, early childhood education, and parent involvement. It is the special education teacher who may have to provide inservice education to regular education teachers. There is some belief, however, that rural teachers have lacked access to inservice education, and may be out of touch with current best practices. Quality of instruction and service depends on the skills, knowledge, and understanding of practicing personnel. States must define manpower needs according to the level and quality of services the school district should maintain in order to meet the requirements of PL 94-142.

Inservice training of special educators and related service personnel is a responsibility of state and local educational agencies. The training needs identified and the training provided to practicing personnel should be incorporated as a part of the Comprehensive System of Personnel Development (CSPD) of PL 94-142.

Effective special education service delivery in rural areas is not without its challenges when we consider factors such as: population sparsity, geographic isolation, inclement weather patterns, and special needs. However, in addressing these challenges, quality of service must remain the primary consideration.

State plans must specify how all handicapped children and youth will receive appropriate education services. A few states are paying special attention to the services which are being provided in rural areas. For example, Wyoming and Wisconsin have initiated special certification requirements which are responsive to rural service delivery problems. Other states (e.g., Colorado) have begun investigating ways to be more responsive to rural service problems. A majority of states now have certification policies which are primarily noncategorical or multicategorical, with categorical certification reserved largely for personnel who serve low-incidence populations of handicapped students. States are turning to regional service units for more efficient service delivery. This regionalization allows for a range of special education and related services with fewer teachers and administrative personnel needed than if similar services were provided by each individual school district.

All of the programs in OSERS' Office of Special Education Programs (SEP) include activities which may impact on issues related to the particular problems of special education in rural areas. A few of our programs, however, focus specifically on rural issues. Two programs, "Handicapped Children's Early Education Program" and "Training Personnel for the Education of the Handicapped," fund projects with a rural focus which deal specifically with unique special education needs in rural areas.

The "Handicapped Children's Early Education Program" (HCEEP) supports experimental preschool and early childhood programs that "show promise of promoting a comprehensive approach" to the special problems of handicapped children and their families. In fiscal year 1984, thirty-three of these projects addressed the special needs of children who live in rural areas. Some of the rural projects are demonstrating activities which develop and validate models for effective services for young children and their families. Another group of projects focuses on outreach, (i.e., assisting rural communities to adapt and install proven models of early childhood services). Characteristic of these efforts is the promotion of early childhood models which help preschool children through parent training and communication. Through the efforts of both demonstration and outreach projects, an informal organization of all Federal early childhood projects has become a consortium to assist in data collection, materials development, and professional updating.

"Rural special educators must understand interdisciplinary models of service delivery, know local community systems, and adapt teaching techniques for specific community characteristics."

The "Training Personnel for the Education of the Handicapped" program is also supporting efforts to upgrade education for special needs children and youth in rural settings. In order to adequately provide services to handicapped students who reside in small, rural school districts, personnel must be appropriately trained to deliver those services. Such educators are prepared to fill a variety of rural-specific roles. In order for handicapped students to receive equal education opportunities in rural settings, special education teachers are often called upon to assist parents, peers, and administrators to access the support systems needed to enable the handicapped student to benefit from their education. Rural special educators must understand interdisciplinary models of service delivery, know local community systems, and adapt teaching techniques for specific community characteristics. These demands require specific training programs which incorporate the opportunities to learn these skills.

In fiscal year 1984-1985, the Training of Personnel for the Education of the Handicapped Program supported 41 projects which prepared special educators to work in rural settings. In an effort to further target support toward training personnel to provide special education in rural areas, a new competition was announced for fiscal year 1985. Projects funded under that competition developed model training programs for the preservice preparation of personnel to work in rural areas. Projects were designed to assist agencies and institutions to develop and maintain quality training programs in order to alleviate identified problems in the supply, distribution, and retention of certified special education personnel in rural areas. Specifically, projects funded under the rural competition provided innovative rural special education training models that are scheduled to be validated and disseminated, and which address one or a combination of the following: low-incidence populations, early childhood, infants, and transition. In addition, training models address: 1) governance; 2) recruitment, admission and retention of trainees; 3) faculty and staff; 4) program content including goals, objectives, and curriculum as it relates to competencies, practicum experiences, and individual experiences; 5) research and scholarship; 6) management; 7) evaluation; and 8) cost effectiveness.

These training models were developed with the cooperation and coordination of parent groups, community organizations, public and private schools, and other significant agencies and organizations. Projects which focus on special education in rural areas will continue to be funded throughout the various competitions sponsored by SEP. The additional competition announced for fiscal year 1986 will provide training modules in colleges and universities, and will have long-lasting impact on the field.

As we address the issue of effective service delivery in rural areas, we must acknowledge the importance of diverse rural subcultures, interagency responsibilities, certification reforms, rural teacher recruitment and scholarship, personnel retention strategies, and information dissemination.

Our goal should be to achieve a shared responsibility by local educational agencies, state educational agencies, institutions of higher education, the Federal government, and other interested professionals to enable us to progress toward the resolution of problems surrounding the development of viable service delivery strategies.

OSERS is keenly aware of this challenge and is ready to work with parents, educators, state and local officials, and other professionals who are committed to making the promise of PL 94-142 a reality for all children and youth with handicaps throughout this country. OSERS will continue in its efforts to provide quality programs which meet the special needs of these students, wherever they may reside.

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Rural school psychology

The *School Psychology Review* (Volume 14, Number 4, 1985) features a series of articles on rural school psychology. The first paper provides an historical overview of the use of school psychologists in rural areas, followed by an overview of emerging models of service delivery. Subsequent papers contain information on obstacles which prevent comprehensive services to rural school children, as well as suggestions for concrete alternative service delivery methods. An innovative preservice training model is described in one of the articles, while another discusses innovative methods of service delivery emphasizing university extension services. This mini-series fills a gap which has existed in published information about rural school psychology and provides valuable references and resources for rural school psychologists. For information regarding specific articles or a copy of this journal, write Michael Chrin, NASP, P.O. Box 184, Kent, OH 44240

Rural special education programs: parents' opinions and involvement

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Denise Morley
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Parent action has, over the years, tremendously influenced the availability of special education programs for special needs students. Notably, the passage of Public Law 94-142, the Education of All Handicapped Children Act, has become a milestone in the annals of public education. For the first time, federal law mandates education and training services for all special needs students from ages 3 to 21 unless there is a conflicting state law. Many states have gone beyond this age range. Some require special education programs from birth; others have extended them to age 25. Key features of all these educational mandates revolve around the parents' right to have input into the educational process from identification of special needs to evaluation that these special needs are being met. Less pronounced are the parents' responsibilities in the educational process (Colangelo & Dettman, 1983).

Many parents feel they would like to become more active in the educational process, but are unsure how their special needs child is functioning at school (Abramson, Yoshida, Wilson, and Hagerty, 1983; Colangelo and Dettman, 1983). In a recent teacher survey, Cone, Delawyer, and Wolfe (1985) reported on three categories of involvement for parents of special needs students: participation in the special education process; contact with the teacher; and transporting the child to and from school.

Implications from these studies pose some interesting questions for investigation. Are parents willing to attend training programs so that they can eventually become more involved in their special child's program? If yes, what type of training would they like to receive? Are they satisfied with their child's special education program and teachers? Are parents' relative differences of opinion about their child's development dependent on the age of the special needs student, length of time he has been in special education, or the category for his exceptionality?

The answer to these and related questions served as the foundation for a survey to assess parents' perceptions of and willingness to participate in rural school programs for their special needs children.

Survey

The survey was conducted during the second semester of the 1984-85 school year at West Virginia University. The survey's main purpose was to aid rural school districts in determining the percentage of parents of special education students who desire parent training, the preference for the type of training, and the parents' overall perceptions of the special education program.

In order to assess variance in parental opinions, the survey items asked for the age of the student, type of exceptionality, and the number of years he/she has received special education services. Except for age, the 12 questions utilized the combination of a yes-no format and a 5 scale Likert rating. Parents were given suggested training programs to choose from, but were also allowed to offer their own suggestions.

Four rural school districts, including a small college and university town from West Virginia participated in the survey. Special education directors chose the population that received the questionnaires as well as the method of dispersal. Two counties sent questionnaires to all parents of special education students. The other two counties used random selection. The questionnaires were sent by one of the following methods: they were either sent home and returned by the students or they were mailed to the homes by county special education personnel and returned by stamped, self-addressed envelopes.

There was a 39% rate of return with 851 parents responding from the 2,183 questionnaires sent. The mean age of the students represented was 11 years. Of the 851 students, 36% were specific learning disabled, 22% had speech or language disorders, 20% were gifted, 7% were considered multiply handicapped, 6% were mildly mentally impaired, 4% were behaviorally disordered, 1.5% were moderately mentally impaired, 1% were hearing disordered, .7% were physically handicapped, .7% were profoundly mentally impaired, and .6% were visually impaired. Fifty-five percent were enrolled in elementary programs and 45% were enrolled in secondary programs. The mean number of years in which students received special education services was 3.5 years.

Results

Rating of the overall program

The programs representing all categories of exceptionality were rated as excellent or good, with good being the most frequent response. With recognition of the low incidence in certain categories, such as the visually and hearing impaired, the strength of certain categorical ratings were broadly interpreted. For example, 11% of the parents of the hearing impaired rated the program poor. However, this poor rating was from one parent's perception.

The teachers received more excellent ratings than good. As a result their rating was higher than the overall program rating. There was no significant difference between the number of years the children were in special education and the rating of the program. The majority of the responses were above average for all years in the program. There was no

significant difference between the number of years in special education and the rating of the teachers. The majority still rated the teachers higher overall than the programs. Ninety percent of the parents indicated that they understood the forms and terminology used during the Placement Advisory Committee (PAC) meeting. Eighty- one percent of the parents felt comfortable confiding in their child's teacher about personal events that could affect their child's school performance. The majority of parents felt they had sufficient communication with the teachers. Still, 48% felt communication should be increased.

Training preference

There was a slight decline in interest in parent training with increased number of years their child was in special education. Seventy-two percent of the parents were interested and willing to participate in parent training programs. Approximately 76% of the parents who had children 12 or younger desired training; 63% who had children over 12 desired training. The parents' priorities for training were as follows: 52%, improving study habits; 43%, aiding academic growth; 36%, improving child's self-concept; 26%, managing the child's behavior; 4% indicated a preference other than those mentioned above. Approximately 52% felt they would like to talk to teachers more; 48% did not feel that was necessary. Specific data on desire and preference for parent training based upon categories of exceptionalities were also noted. Many parents checked more than one training preference.

Conclusions

The following implications and interpretations were derived from a statistical analysis of the data obtained in the survey. They are suggested as aids to those concerned with determining needs and parameters for parent training and possible modifications for current programs.

When the child has been in special education for a long time, it appears that the parents may actually become slightly less interested in being involved with their child's program. This trend has been manifested in at least one other study (Cone, Delawer, Wolfe, 1985). Perhaps this trend will be altered as school programs offer parent training when the child is first placed in special education. Periodic assessment of parental training needs should be conducted in order to update parent training programs and prevent parent burnout.

Many parents are more interested in training programs that pertain directly to academic rather than nonacademic topics, such as improving study habits rather than improving self-concept. This finding is indeed interesting, since few commercial parent training packages and workbooks give direct instruction on how parents can aid academic skill development. It is important to note that specific categorical priorities were not always consistent with this trend. For example, managing behavior was the number one priority of parents of children with behavior disorders.

The parents expressed satisfaction with the teachers of all exceptionalities. However, some felt their communication with teachers should be increased. It is important, therefore, that teachers have good communication skills and strategies.

The parents seem to understand the forms and terminology as well as the procedures used at the Placement Advisory Committee (PAC) meeting. They are satisfied with the programs, since the majority rated them above average. Major modification of the current programs for these rural school systems does not seem to be indicated at this time. What is needed are opportunities for parents to receive training in the areas they feel are important.

Similar surveys of parents' opinions and potential involvement in special education programs should be conducted in all of our school systems. Information of this kind could provide the foundation for a home-school partnership for supporting quality special education in rural areas.

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Toll-free line for missing children

As a result of the requirements of S.B. 321, the Missing Children Act, a toll-free telephone line has been installed for use by staff, parents, or students who wish to make inquiries concerning the Missing Children Educational Program. The number is 1-800-325-5604.

Factors in the development of rural transition programs

Joyce K. Beam
Charles County Board of Education
Charles County, Maryland

The transitioning of handicapped students from school to adult life has become a national priority. Obstacles to successful transitioning are found mainly in the areas of existing gaps in interagency cooperation, lack of in-school work-related programs, and insufficiency of follow-up services. In addition, problems unique to rural areas confront the disabled person. These problems include: mismatch of curriculum content to life in rural areas; lack of transportation systems; limited employment opportunities; and higher costs of related services as compared to urban areas, due in part to travel requirements and limited personnel resources.

According to a 1984 study by the American Council on Rural Special Education (ACRES), only 14% of rural disabled students who had exited high school were in postsecondary job training programs, while 23% were in integrated employment settings. The largest percentage (63%) were placed in segregated settings such as sheltered workshops, group homes, institutions, or with parents (Helge, 1984).

Unfortunately, only 58% of the rural communities surveyed had a job training program designed for disabled post-secondary students. "These findings serve to emphasize the serious significant national problems related to transition from school to working life for rural students with disabilities." (Helge, 1984, p. 2.).

In an attempt to explore solutions to problems in developing rural transition services, a more comprehensive definition of transition including the areas of leisure, housing, and personal-social skills must be employed. Emphasizing these skill areas in school-based settings will facilitate transition and help to ensure a productive adult life. Presenting skills related only to success in the employment area does not ensure that daily living and survival skills will be mastered (Edgar, 1985).

Curriculum content

Reviewing the past fifteen years, much attention has been focused on appropriate content curriculum for disabled youth. The need for functional academics, career education, and vocational education has been emphasized. Many advocates of the career education approach recognize the similarities between the transition approach and sound curriculum leading to independent and satisfying lives for the disabled (Brolin, 1985).

Rural secondary programs must adopt, if they have not done so already, the philosophy of career education, vocational training, and work-related experiences for young adults. Transition programs should be attuned to the specific needs of clients in their rural setting. Key components of such a program would include:

- Identifying competencies needed for success in the rural setting
- Matching the secondary school curriculum to available employment opportunities
- Identifying adult service providers and incorporating the "how to" of accessing services for parents and students into the school program
- Implementing a work program which uses placements within the community vs. those simulated in school experiences
- Conducting instruction whenever possible in community-based settings.

Results from a study by Hasazi, Gordon, and Roe (1985), indicate that educational and vocational experiences do influence employment status following graduation or exit from school. The study's findings support the inclusion of these components in students' IEPs, and subsequently, their individualized transition plans.

Collaboration of resources

The responsibility for ongoing transitional and supportive services extends beyond the public school to include other adult service providers. Coordinated efforts among rehabilitation services, social service agencies, day programs, vocational training facilities, and transportation providers are essential, particularly in sparsely populated areas. This cross-agency planning and cooperation is an effective management vehicle for responsible fiscal programming (Greenan, 1980; La Cour, 1982) and reduces costly duplication of services.

Although federal legislation has actively advocated the development of formalized cooperative agreements, the impact of agreements which currently exist may have little or no effect on local planning. Attitudinal barriers and differences in definitions and funding priorities among agencies severely inhibit cooperative transition efforts. With the premise that individual transitional planning efforts commence for handicapped youth at ages 14-16, cooperation among agencies becomes a critical issue.

In areas where formal or informal agreements have been explored, a local coordination team may be established to explore the transition issue. Representatives from the previously mentioned service providers, public schools, parents, and employers should aggressively explore the issues facing disabled adults in the community. Emphasis should be placed on information exchange in the areas of services provided, eligibility requirements, and individualized planning procedures of the respective agencies. (Wehman, Kregel, and Barcus, 1985). A productive outgrowth of this exchange would be the eventual development of formalized cooperative agreements detailing parameters of service delivery. Development of such a team should enhance the quality of services provided and reduce the gaps presently experienced by clients and parents pursuing adult services.

Business/industry/citizen advocacy

Deinstitutionalization has had a profound effect on our communities. Handicapped adults who previously resided in institutions are returning to their homes or community group residences. While the intentions and outcomes of persons advocating this movement are beyond reproach, there has been serious neglect in cultivating awareness and involvement among potential employers and the community at large regarding these new community members. Employers lack information regarding the potential of the disabled as workers and incentives for hiring the handicapped. Businesses and employers in general need to see themselves not only as potential employers of the handicapped, but as a contributing part of community-based instruction with the local education agency. The involvement of employers on a local coordination team will facilitate exchanges of information and enhance the acceptance of disabled adults within the community both as employees and as consumers.

Trends in future employment opportunities will create new opportunities for the disabled. The number of workers employed in the manufacturing industry has decreased, while the number of workers in service occupations continues to rise. It has been predicted that by 1995 there will be 28.5 million people employed in service occupations. Only 22 million workers will be in the manufacturing industries. A case in point — McDonald's Corporation now employs more workers than United States Steel. In many instances, these "trends" already exist in rural areas, where small businesses and service are the sole employers.

The disabled adult of tomorrow must be prepared for careers in the service industry. Careful study of local needs should be undertaken to determine specific vocational training skills to be taught. The employment community should not be encouraged to hire disabled adults out of a sense of charity. Through increased public awareness and education, employers may learn to view the disabled as a viable alternative to fulfill their employment needs.

Family input and support

The involvement and active participation of parents in the transition process cannot be overlooked. Frequently, parents and/or guardians are confused concerning adult services for their young adult. There is a need to review with parents the services available as well as the criteria for these services. Involving adult service providers in annual admission, review, and dismissal (or IEP) meetings will assist parents and educators in planning the individual transition plan prior to school exit.

There remains a need to educate parents in viewing their handicapped child as a productive working adult. Many parents are not aware of the employment potential of the disabled and are fearful of the child learning or working in a community-based setting. Social Security Insurance and Social Security Disability Insurance are seen by some parents as reasons not to participate in career-based training curricula. Threat of loss of funds may outweigh the potential benefits of competitive employment.

One solution to these problems is the development of parent support groups. Information concerning transition and employment goals should be presented to the parent by the time the student reaches 16 years of age. Content of the parent education activities should be based on problems and concerns identified through needs assessment activities (Wehman, Kregel, and Barcus, 1985). By the time a handicapped student reaches adolescence, parents should be aware of services and curriculum emphasis within the school setting leading toward successful transition.

Parent visits to existing day programs and group residential homes should be encouraged. This process may alleviate some misconceptions and fears of parents concerning adult service providers. This firsthand experience and information gathering should assist parents in actively participating in the development of their child's transition plan.

Summary

Rural and urban areas are facing the transition issue as our disabled youth exit the public school system. Productive adult life for the handicapped and the creation of positive attitudes by the community towards these adults are common goals in all geographic locations.

The disabled youth or adult in a rural area faces problems which must be addressed at the local level. Specific questions need to be addressed by education, business and parent, and citizen groups, and a needs assessment should be developed to aid in the transition process. Possible avenues for improved service delivery need to be explored as a collaborative community effort.

The following areas need particular attention and should be fully explored before transition programs are implemented:

- Does the school curriculum realistically prepare the student for adult life in this community in terms of leisure, housing, and employment?
- Are there existing vehicles for cooperative service delivery by adult service providers?
- Who is responsible for follow-up services to both the disabled adult and the individual's family?

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• Have community members been made aware of the needs of the disabled adult in the areas of employment, housing, leisure, and personal-social experiences?

• Have parents been provided the necessary information to assist the student and adult in identifying transition needs and subsequently developing the transition plan?

Disabled youths and adults will face many unforeseen challenges as they exit the school program. We as service providers must develop transition programs with realistic goals and coordinated community services to assist them in reaching their full potential. The future holds promise for the disabled if we can overcome existing barriers to a fully mainstreamed adult life. This is the challenge facing advocates of the handicapped.

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Employment Incentives Manual: motivating businesses to hire individuals with disabilities

The *Employment Incentives Manual* was developed by the American Council on Rural Special Education (ACRES) in consonance with its national project focusing on transition services for rural students with disabilities. Compiled to assist rural educators and direct service providers in working with potential employers, the manual provides information on incentives for employers and businesses hiring persons with special needs. Monetary incentives such as tax credits and supplemental training funds are described, and contact addresses are listed. Also included is a list of facts to dispel common myths employers may have regarding workers with disabilities. These facts, obtained through research, are useful in educating potential employers of disabled individuals. For more information, contact Phebe Schwartz, Transition Specialist, American Council on Rural Special Education (ACRES), Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

Project Nexus

Project Nexus is a Kansas-based group for linking special needs students and their families with appropriate community services. Through its three-year contract with the National Institute of Handicapped Research, Project Nexus is currently field testing nationwide a community participation manual. The manual is being developed to help communities design and plan ways to provide services for chronically ill and disabled children and their families. The project's results are expected to significantly affect national and state policies, community involvement, and most important, disabled and chronically ill children and their families. For more information on Project Nexus, contact Robin Hazel, Nexus Project Director, Department of Special Education, 377 E. Hayworth Hall, University of Kansas, Lawrence, Kansas 66045-2330; (913) 864-4954.

Training teachers of the visually handicapped in highly rural states: low availability - high priority

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A national shortage of teachers in all areas of education is reaching critical levels. Within the field of education, special education experiences a very high rate of burnout. Consequently, turnover in special education positions is quite high, and the shortage of qualified teachers is more acute. This is especially true in low-incidence categories of disability such as a visual handicap. Shortages of teachers in these areas have a critical impact on the availability of services to rural children.

Recruitment and retention of qualified personnel in rural areas is problematic. Ludlow (1985) conducted a survey of school administrators responsible for special education programming in an Appalachian region. With a return rate of 100%, two-thirds of them reported difficulties in recruiting special education teachers. Nearly half reported retention problems. Ludlow (1985, p. 24) commented, "The turnover rate was established at approximately 90% every three years."

Most respondents offered the same two solutions for reemployment problems. They suggested monetary incentives in the form of tuition waivers/stipends and salary increases. Ludlow (1985, p. 25) also reported that almost half of those responding suggested ". . . increasing the number and availability of training programs so that teachers employed under temporary permits could obtain course work and practica required for certification."

A national study conducted by Helge (1981) documented the factors relating to nearly 100% turnover rates every three years as low salaries, geographic and climatic conditions, certification requirements, and availability of training programs.

Results of the above studies clearly indicate the need for special education teachers and the need for training programs designed to meet the needs of a rural state. The shortage of teachers of the visually handicapped relates to many factors. There are few teacher training programs in the United States that prepare teachers to work with the visually handicapped. Several are centrally located within large, rural regions of the U.S. and may provide the only opportunity for training within a radius of several states. Few teachers are willing to travel long miles and to bear the expense of travel and accommodations in order to obtain the necessary training.

In contrast, Texas has three training programs located in different areas of a very large, rural state. However, it experiences an ongoing teacher shortage each year that reaches triple digit numbers. Texas has had the economic base for the provision of these specialized services and the salaries to encourage people to secure training; still, shortages remain. Similarly, California has two training programs and experiences teacher shortages in visual impairment. Regardless of the availability of training programs, most states seem to face a shortage of qualified teachers of the visually impaired. Also, due to the low incidence of visual impairments, it is difficult for any one state to support more than one training program with adequate enrollments.

Problems

Most teachers prefer to take training that will prepare them in generic special education. This provides more flexibility in job placement, as there are more jobs to choose from and a wider variety of youngsters with which to work. Rural districts usually prefer to hire generalists rather than personnel trained in one specific area, especially when that category involves only .01% to .02% of the total school population as in the case of visual impairment (Kirk & Gallagher, 1985). Yet, it is the desire of all districts to provide teachers with appropriate training to meet unique needs of children in all disability areas. This is the urgent request of parents and is within the spirit of the law.

Many factors impact the educational system to effect teacher shortages in low-incidence handicapping conditions. There are large geographical regions of the country with only one training program. There are relatively few jobs because there are fewer children to serve in relation to the total special education population. Districts are hesitant to hire teachers who do not hold certificates in more than one area of special education. Teachers often must incur travel expenses in addition to school fees in order to take the specialized training they need; this is very unattractive. In many cases, people must pay out-of-state tuition, and attend intense summer programs in order to get the training necessary for the certificate in visual impairment.

Solutions

South Carolina is a highly rural state with teacher shortages in all areas of special education. In the area of visual impairment, there is a very small annual turnover rate of open positions per year. These teachers are sought and desperately needed. However, the need does not generate large class enrollments for the only training program for teachers of the visually impaired in the state. The University of South Carolina (USC), centrally located in the capitol city of Columbia, provides the only training program in visual impairment in the state. The nearest programs regionally are at Nashville, Tennessee; Raleigh, North Carolina; and Talahassee, Florida. Several strategies have been instituted in administration of the program to maintain enrollments, meet the needs of a highly rural state, and facilitate an ongoing program of instruction in a highly specialized area of training.

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Graduate regional studies programs

The College of Education at USC provides many graduate courses by extension through the Graduate Regional Studies (GRS) programs. Faculty members go off campus into the regions of the state and teach the graduate curriculum in satellite campuses of the University. The nine regional campuses are strategically located in order to meet the educational needs of the state. Many special education courses have been offered through GRS programs.

Contract courses

Many of the state's local education agencies (LEAs) contract courses from GRS for their teachers. The courses can then be offered in the school districts. For a contract fee, the district can enroll up to 25 professional personnel in any course they purchase. The students are usually charged a nominal fee for registration. This provides a great incentive for the staff to take continuing education, and offers the added advantage of working on-site. Even though the classes meet when the children are not there, the opportunity to use the materials during instruction is exemplary.

Recruitment

The GRS courses provide a wonderful opportunity for recruitment of students. Many people become interested in working with visually impaired children through GRS courses. Contract courses usually draw a fascinating cross-section of personnel in the schools. In addition to teachers of the visually handicapped, regular teachers, special education directors, nurses, counselors, and many others become involved. Many of the best special educators come from the regular classroom.

Innovations in scheduling

Class schedules must be more flexible than the traditional one-night-per-week model. Many people are unable to make long drives (in some cases 3 1/2 hours one way) every week. A variety of class schedules have been used in order to provide training in a low-incidence area of specialization to an entire rural state. Following are some examples.

• Weekend courses: One alteration involves the scheduling of the 15 week semester into four weekend sessions. These sessions are spread out across the usual semester calendar. Classes are held the exact number of contact hours and are scheduled for Friday evening and all day Saturday. At least two to three weeks must be allowed between each weekend session. Students have responded very well to this scheduling, especially those for whom travel time would prohibit the pursuit of continuing education.

Of course, not all subject matter is amenable to this schedule. Introduction and methods courses have worked very well. However, certain courses such as beginning braille and advanced braille include content that requires weekly practice sessions in order to absorb and internalize the content and are not offered on this schedule.

• Telecommunications: Braille is taught through the Telecommunications Department of USC. The instructor teaches in a video studio with local students attending class in the studio/classroom. Students in other areas of the state can take the course by registering on a regional campus and viewing the session via telecommunication at a local technical school or USC regional campus. The "talk back" capacity between centers allows all students and the instructor to communicate throughout the session. Backup tapes are recorded for students who may miss a session or have equipment failure on the day of class. All students are expected to attend four Saturday sessions for practical work, examinations, and introduction to use and development of materials.

• Videotape courses: Several courses have been produced on tape. The semester's lectures are sent on videotape via UPS along with class handouts, books, and study materials to the students who have enrolled and paid fees. Each person selects a preferred tape format. There are four Saturday sessions on the main campus for practical work, student interaction, and training in the use of materials.

This format has become very popular. The students can view the tapes in their home on their own VCRs (often the nearest regional campus is quite a distance), review lectures as they wish, and look forward to meeting with their classmates several times throughout the semester. As telecommunications personnel do not like to tie up air time for very low-enrollment coursework, this method is also more cost effective.

• Sequence of course offerings: The training program in Education of the Visually Handicapped (VH) at the University of South Carolina offers VH certification courses beginning in even-numbered years, and advanced master's degree courses in odd-numbered years. There is at least one course in VH offered each semester. There are few full-time students in special education, as it is a graduate-level program. Most of the students are full-time teachers during the time they take courses and do not wish to take more than one course per semester.

When introductory and procedures courses in VH were offered every year, the courses were often closed out due to low enrollments. This schedule of offering courses has boosted enrollment and helped to maintain a more stable training program. The administration is supportive of the program which maintains consistent enrollments.

• Public awareness: Flyers on all VH courses are sent to directors of special education and to the VH teachers in the state. In this way, VH teachers become aware of opportunities for continuing education and courses for recertification. Special education directors can recruit teachers from the

regular classroom or send in out-of-field-permit people for the certification courses they need. The flyers have been a successful way to project enrollments. Tear-off strips also provide the person's name, address, and phone number for further mailings. The flyers also promote awareness of the training program and its activities. This provides some visibility for low-incidence areas of disability.

Conclusions

Many of these ideas and methods have been used for years by departments in the colleges of education. Creative modification and implementation to meet the needs of a low-incidence training area have doubled and sometimes tripled class enrollments. Nevertheless, class sizes in graduate VH classes are less than those in learning disabilities, emotional disturbances, and mental retardation.

Teamwork between the coordinator of a teacher preparation program for a low-incidence area and the department chairperson is the key to success. Administrative support for maintenance of low-incidence, low-enrollment programs is essential. Informing the administrator of projected enrollments is vital. Above all, providing information to the administration about the incidence of the children in the schools, their need for services which address their unique needs, and the national shortage of teachers in the area of VH is critical.

In most states in the U.S., only one VH teacher education program operates in the state, if not in the region. This often helps administrators realize the need to maintain and support the program as an on-going curriculum for the department. Maintaining teacher preparation programs in low-incidence areas of disability helps the special education program in any university continue to offer comprehensive training for personnel in education of handicapped children.

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RSEQ

Economic technical assistance to rural organizations and groups

The economic crisis confronting rural communities has created a critical need for the development of strategies to encourage public and private sector job creation and to influence public policy that adresses the structural unemployment in rural areas across the country. The Rural Coalition is committed to supporting the efforts of rural organizations and constituencies and providing assistance to address issues and related concerns. To this end, the Coalition has implemented a project of technical assistance to rural groups to provide targeted and general support which will improve and expand their ability to influence public policy and more effectively confront the economic situations in their communities.

The Coalition assists rural communities by identifying and facilitating the use of existing public and private resources and technical providers in meeting local needs. The major activity in the provision of targeted technical assistance is on-site consultation and assistance in the form of personal visits. The length of time spent at each local site will depend on the extent of the local need(s), but in most circumstances the initial visit will be an average of three days, with an average of two one-week follow-up visits during the project year.

Targeted support is provided in one or more of the following areas: organizational development; program/project development management; strategy development and management; personnel management; community relations; resource analysis; fund raising; research; and self-help ventures. General support is provided by disseminating information and referral of clients to persons able to provide additional assistance or support in meeting need(s). Assistance may be provided on an individual or a group basis.

Special attention will be given to organizations, groups, or individuals serving or proposing to serve minorities and/or youth. When several requests are being considered simultaneously, the following priorities have been established in order to determine which organization, group, or individual will be provided targeted technical assistance: population(s) of 10,000 or less; minorities and/or youth; a state or jurisdiction which has received little or no technical assistance or support and for which none is readily available; organizations, groups, or individuals in existence or working together for less than three years; employment-related crisis or organizational survival issues; and organizations or groups that have been associated with or involved in the activities of the Coalition.

For more information, or to request technical assistance, contact: Katie Johnson, Program Associate, Rural Coalition, 2001 S Street, N.W., Suite 500, Washington, D.C. 20009; (202) 483-1500.

Inventory for client and agency planning

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As presented at the 1985 National Rural Teacher Education Conference in Bellingham, Washington

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The Inventory for Client and Agency Planning (ICAP) is designed as a general tool for managing client information in a number of areas important to planning and evaluating services for handicapped, disabled, and elderly people. It includes important identifying information; a description of diagnostic and health status; normative scores for adaptive behavior and problem behaviors; information on service level, service history, current placements and projected service needs; and data on support services and social-leisure activities. The ICAP is primarily a program and client management device rather than a detailed scale for planning individualized training programs. It may, however, assist in making initial decisions regarding service needs and in periodically evaluating an individual's behavioral changes and participation in various service options.

The ICAP provides a means of recording information on client status, development, and needs in a number of areas that are important to a wide range of community service agencies. The most extensive benefits will occur in both the community- and institution-based residential programs, nursing homes and related services, educational programs, and various daytime habilitation and work training programs for handicapped and disabled individuals. It is intended as a screening instrument for managers to use in initial case planning and as a device for generating descriptions of the aggregate characteristics and service needs of their populations. It allows for efficient collection and analysis of large amounts of information with potential for automated data system reports. The ICAP is, therefore, ideally suited for screening purposes, initial assessments of service, eligibility, program monitoring, and program evaluation. It is also useful as a management information system to assist in public reporting and decision-making.

Identifying information

The ICAP gathers information required by many state and federal licensing regulations as well as criteria set forth in the federal government *Long Term Care Minimum Data Set* and other reporting requirements.

Diagnostic and functional limitations

The inventory provides detailed information on diagnostic status, medical and physical characteristics, and important functional limitations in vision, hearing, mobility, and health. This information is essential for determining eligibility for support services, screening for admission to residential or habilitation programs, and evaluating program appropriateness on a continuing basis.

Adaptive behavior

ICAP contains 77 carefully developed adaptive behavior items organized into four domains of independence: Motor Skills, Social and Communication Skills, Personal Living Skills, and Community Living Skills. The adaptive behavior section provides a variety of normative scores by domain and a total independence score (age scores, percentile ranks, and standard scores).

Problem behaviors

The inventory consists of eight areas of problem behavior organized to provide a profile of maladaptive behavior. The problem behaviors are assessed within comprehensive categories and yield information on all specific maladaptive behaviors exibited by an individual, the frequency and severity of their occurrence, and the behavior management procedures used consistently by people in the individual's environment. Special statistical scales are provided for interpreting clinically significant problem behaviors for each of the eight areas, and for four special indexes (internalized maladaptive index, asocial maladaptive index, externalized maladaptive index, and overall maladaptive index).

ICAP service index

The Service Index Score combines adaptive behavior and maladaptive behavior scores to yield an overall measure of a client's need for care, supervision, or training. The Service Index Score was developed in recognition of the fact that adaptive and maladaptive behaviors interact and that neither score alone is sufficient to predict the service intensity required.

Services

ICAP provides a brief description of an individual's service history including therapeutic and community-based support services, and a projection of future service needs.

Recommendations

ICAP provides space for listing general and specific recommendations for clients.

Special features

- The maladaptive behavior and problem behavior portions were normed on a national sample of nonhandicapped people from birth to mature adult.
- A structured scoring scheme is used throughout which provides normative scores for adaptive behavior and problem behavior as well as level of services required.
- ICAP is a self-administered booklet which is completed by an individual who knows the client well. It does not require a special interview.
- The design and format of the scale requires minimal sophistication in test administration. It does not require a professionally trained examiner.
- The entire instrument can be completed in 20 minutes or less.
- The client population for this scale is children or adults being considered for in-home support services, residential care facilities and nursing homes, rehabilitation services, day programs, work programs, and educational programs.
- Automated data processing and computer scoring procedures are being developed to rapidly score large numbers of protocols and to produce highly useful management information profiles.
- ICAP includes comprehensive information in many areas needed to assess eligibility, planning of services, and monitoring of client progress.

Technical research

Extensive technical research was done on the ICAP. The adaptive behavior and problem-solving behavior portions of the scale were standardized on a nationally representative sample of children and adults. Additional studies on over 2,000 handicapped children and adults in a variety of educational, residential, habilitative, and work settings provided additional information for the ICAP's development. The ICAP's *Technical Manual* (in press) summarizes the results of numerous reliability and validity studies. Median split-half reliability on broad independence for 1,510 nonhandicapped subjects was .86; for more heterogeneous groups of handicapped subjects, median split-half reliabilities were above .90. Typical test-retest and interrater correlations were above .80 for adaptive and maladaptive scales. Validity data indicate that the ICAP differentiates educational, residential, vocational, and diagnostic groups well.

Currently, the authors of the ICAP are developing a data analysis program to provide efficient scoring and summary information for program administrators at the local, regional, and state levels.

PSRO

Special Education Software Center

The Special Education Software Center is a service for parents, teachers and other professionals involved in educating handicapped students. The Center is funded by the U.S. Department of Education's Office of Special Education Programs, and is implemented by SRI International of Menlo Park, California. SRI is assisted by two subcontractors, LINC Resources of Columbus, Ohio, and the Council of Exceptional Children of Reston, Virginia. The mandate of the center is to improve the quality and availability of special education software and to promote software development. To date, the Software Center has responded to 12,000 plus requests. Their mailings include printouts and bibliographies of software available in specific areas of special education. The Center is a free resource for anyone with access to computer, telephone or mail box. By mail, contact: Special Education Software Center, Building B, Room S312, 333 Ravenswood Avenue, Menlo Park, CA 94025. For technical assistance call: Phone: 1-800-223-2711 / TTY: 1-800-435-7639. For software information call: 1-800-327-5892.
Source: SpecialNet

USA Toy Library Association

About 150 toy libraries have been developed across the United States, to provide opportunities for children with disabilities to develop motor, perceptual, and social skills through play. The library may be housed independently, in a local facility such as a hospital, or in a van to provide mobile services. Special toys are chosen for their simplicity and adaptability. Some toys, for example, can be operated by puff of breath. Most toy libraries charge a small fee, which pays for only a small percentage of their operating costs. Foundation and corporate contributions are an additional support. For more information contact: Judith Iacuzzi, Executive Director, USA Toy Library Association, 1800 Pickwick Avenue, Glenview, IL 60025.
Source: SpecialNet

Problem-solving strategies

Needs	Strategies
Linking regular and special education	The INREAL (INter-REActive-Learning) Rural Reunification model is an inservice model designed to unify the efforts of special and regular educators in rural areas in order to decrease educational fragmentation for handicapped and nonhandicapped children. The INREAL model responds to current concerns regarding: the realities of shrinking financial support for education; limited access to qualified professional staff; improved learning experiences in the mainstream environment; increased referrals for special education services; and decreased continuity between regular and special education. The model is based on a set of dynamic communicative and learning principles. The learning environment created by the INREAL educator is responsive to the individual and developmental needs of children regardless of age or handicapping condition and is, therefore, well suited to implementation in a mainstreamed setting. The INREAL model provides intensive individualized inservice training to regular and special education, administrative, supervisory, and direct service providers through the analysis of videotaped child-adult interactions. For more information, contact Rebecca K. Edmiaston, INREAL Implementation Coordinator, CDSS, Campus Box 409, University of Colorado, Boulder, Colorado 80309; (303) 492-8727.
Providing role models for rural gifted students	A viable plan to provide appropriate role models for gifted students in rural areas is to utilize characters in literature. Contempory characters such as Tony Isadors in *Who Really Killed Cock Robin*; Claudia Kincaid from *The Mixed-Up Files of Mrs. Basil F. Frankweiler*; Leroy Brown from *Encyclopedia Brown*; and Jessie Oliver Aarons, Jr. in *Bridge to Terabithia* are examples of such role models. Older classics such as *Alice in Wonderland* or *Elephant Girl* may require an extensive background, outstanding imagination, and ability to sustain attention on several levels simultaneously. Reading offers productive opportunities for gifted students to engage in meaningful, self-directed learning. For more information on how to make these books relevant in class discussions and in other assignments for gifted students, contact Roberta Daniels, Coordinator of Program for Gifted, Talented, and Creative, Arkansas State University, P.O. Box 940, State University, Arkansas 72467; (501) 972-3061.
Providing an assessment instrument for tracking the development of children who have impaired or delayed motor ability	The Rural Infant Stimulation Environment (RISE) Computerized Checklist (RCC) was developed to assess and track the development of children who are motor impaired or delayed. Specifically, RCC is designed to be utilized with children who have deficits in motoric functioning; have been diagnosed as developmentally delayed; exhibit hypotonia (low muscle tone) or hypertonia; or have abnormal movement patterns such as those associated with cerebral palsy. The checklist is cross-referenced with a computerized curriculum to supplement the assessment instrument with therapeutic classroom activities and objectives. The RISE Computerized Checklist is the result of ten years of demonstration activities using physical management programs and is a valuable tool for use in rural preschool programs, developmental centers, and school systems which must rely on the services of a consulting therapist. For more information, contact Loreta Holder, Department of Special Education, University of Alabama, P.O. Box 2592, University, Alabama 35486; (205) 384-7340.

Upcoming events

AHSSPPE: Ninth Annual Conference

July 23-26, 1986
San Diego, California

The Association on Handicapped Student Services Programs in Postsecondary Education (AHSSPPE) is holding its ninth annual conference at the Sheraton Harbor Island East, in San Diego, California, from July 23 to 26, 1986. Workshops dealing with computerization, advanced technology, learning disabilities, transition strategies, personal and professional growth, understanding legislation and the legislative process will be presented. The annual conference is an opportunity for educators to develop and expand communication with other professionals in the field, and to learn about issues and concerns affecting service providers and students in post secondary education.

AHSSPPE is a nonprofit professional organization with more than 650 members representing more than 400 institutions in the United States, Canada and other countries. The group is committed to promoting full participation of individuals with disabilities. For additional information regarding the conference or AHSSPPE, contact Jane Jarrow, P.O. Box 21192, Columbus, Ohio 43221, (614) 488-4972 (Voice/TDD).

Rural Adult Postsecondary Education Conference

September 7-9, 1986
Airlie House, Virginia

The National Invitational Conference on Rural Adult Postsecondary Education will be held in Airlie House, located in rural Virginia, September 7-9, 1986. The Action Agenda Project at Kansas State University awarded an honorarium of $1200 to each author selected to give a position paper at the conference. One proposal was selected in each of four topical areas: models for collaboration and cooperation in service delivery to rural areas; finance and policy issues affecting rural adult education; the role of education in rural economic development; and potentials and limitations of technology in serving rural adults. The conference is a forum for specialists in the field of rural education, and attendance is by invitation only. For more information, contact Jacqueline D. Spears, Action Agenda Project, 1221 Thurston, Manhattan, Kansas 66502; (913) 532-5866.

Exposition '86: Innovative Programs, Research, and Technologies in Rural Education

October 7-10, 1986
Bellingham, Washington

The National Rural Teacher Education Consortium and the National Rural and Small Schools Consortium will sponsor their annual conference October 7-10, 1986. This conference will explore innovative programs, research, and technologies in rural education. Rural preservice and inservice strategies will constitute major conference strands. Participants will include rural public school professionals, university deans and faculty, school board members, parents, and other individuals from agencies and organizations related to rural education. Networking will be facilitated through job-alike sharing sessions, expansion of the National Rural and Small Schools Consortium, the National Rural Teacher Education Consortium, the National Rural Education Research Consortium, and the exploration of partnerships with such groups as county extension agencies and volunteer rural service organizations. The keynote speaker will be Dr. Rebecca Yount, of the Council of Chief State School Officers. Other speakers will include a representative of the office of the Secretary of the U.S. Department of Education and representatives of the U.S. House and Senate. Presentations will be accepted for a variety of formats including general and small group sessions, individualized learning centers, product demonstrations, and roundtable discussion groups. For further information, contact the National Rural Development Institute, Miller Hall 359, Western Washington University, Bellingham, WA 98225; (206) 676-3576.

Computer Technology/Special Education/ Rehabilitation Conference

October 16-18, 1986
Northridge, California

The second annual conference on contemporary applications of computer technology for special education and rehabilitation will be held October 16-18, 1986 on the California State University campus, Northridge, CA. Sponsored by the Office of Disabled Student Services at Cal State, the conference will focus on applications of microcomputer hardware and software, innovative adaptive devices and training programs, and results of research. For more information, contact Dr. Harry J. Murphy, Office of Disabled Student Services, California State University-Northridge, 18111 Nordhoff Street, Northridge, CA 91330.

Conference report

Sixth Annual National Rural Special Education Conference

"Practical Approaches for Rural Service Delivery"

held in Tucson, Arizona in April, 1986

Kathleen Mary Huebner
American Foundation for the Blind

The Sixth Annual National Rural Special Education Conference, sponsored by the American Council on Rural Special Education (ACRES) was held in Tucson, Arizona on April 22-25, 1986. The program offerings were representative of the theme, "Practical Approaches for Rural Service Delivery." In addition to the general sessions which addressed national concerns, trends, and federal priorities, there were nearly 100 concurrent session offerings. Some of the 37 strand areas included Abuse, Neglect, and Crisis Intervention; Accreditation and Certification Issues; Administrative Strategies; Early Childhood Intervention; Funding and Resources; Graduate and New Teacher Needs; Independent Living; Inservice Programs; Interagency Collaboration, Leisure and Recreation; Working with Legislators and School Boards; Serving Low-Incidence Disabilities; Using Advanced Technologies; Transition; and Vocational Planning and Training.

The keynote speaker was Dr. Patricia Morrissey, Deputy Commissioner of the Rehabilitation Services Administration of the U.S. Office of Special Education and Rehabilitative Services. Among the topics addressed by Dr. Morrissey were some of the implications arising from the differences between special education and rehabilitation, and ways in which ACRES can become more involved in rehabilitation programs. One of the main differences between special education and rehabilitation, according to Morrissey, is in labelling. PL 94-142 is an *entitlement* program which guarantees every handicapped child a free public education. On the other hand, the Rehabilitation Act is an *eligibility* program in which potential recipients are evaluated for services which will help them obtain employment. In order to qualify for services, the individual must be disabled; but limited program finances dictate that not everyone will be served.

Dr. Morrissey also commented on future projects for ACRES. She said that ACRES has made an "energetic and effective impact on special education and it is time to fully translate this success into dealing with vocational rehabilitation." In order to make an impact in the area of rehabilitation, it must first be understood how the system works in a particular state or district. ACRES was praised as an "organization, more than any other organization in the country, which has made a serious investment in dissemination of 'what works.'"

Seventeen national task forces are coordinated by ACRES. Working luncheons and evening meetings were used to enable these task forces to share resources, services, and expertise. Contributed ideas and information were used to establish priorities and develop effective rural special education strategies and practices. Membership in task forces is voluntary and encouraged. A description of the task forces is available from ACRES.

In a videotaped message, Senator Orrin Hatch invited conference participants to contribute to the legislative process by keeping their legislators informed on how laws like the Education of the Handicapped Act are working. Educators were told that it's "really never too late to influence legislation." Senator Hatch urged the members not only to identify problems, but to give recommendations for possible solutions and added, "Your achievements keep me going when I am working hard on the Senate floor to promote legislation to help your cause."

This is the third year I have had the privilege of attending the National Rural Special Education Conference. Each year there has been a balance of offerings in presentations, workshops, and actual working sessions. This year the conference registration exceeded 300, yet the atmosphere continued to be one which catered to individual needs and promoted informal exchanges among participants. Practical, workable, and effective strategies to overcome some of the difficulties inherent in providing services in rural areas were prevalent. All sessions encouraged interaction. Presenters not only welcomed questions but encouraged suggestions and strategies from those in attendance. The concepts, practices, interventions, strategies, and methods presented were generalizable to providing services for any and all disability groups residing in rural areas.

The National Rural Special Education Conference should be a "must" for all service providers, administrators, teacher educators, parents, etc., who are concerned with students in rural areas. Further, I would encourage these individuals to join ACRES and to be regular readers of and submitters to the *Rural Special Education Quarterly* and the newsletter, *RuraLink*. I would further encourage readers to obtain the catalog of *Rural Education Publications* from the National Rural Development Institute (NRDI). Both ACRES and NRDI are located at Western Washington University, Miller Hall 359, Bellingham, WA. 98225; (206) 676-3576. The publications are excellent resources which are relevant and reasonably priced.

The NRDI and ACRES should be a primary resource for those of us providing services to students residing in rural areas. Upcoming issues of the *Rural Special Education Quarterly* will include articles targeting Preschool Handicapped, Transition, Family/Professional Relationships, Research, Program Evaluation, Preservice, Personnel Retention/Recruitment, and Cross-Cultural Issues. The unique needs of students residing in rural areas should be recognized by their service providers. It is extremely important that programs developed and implemented by readers be shared so you are encouraged to submit your work for consideration for publication in the *Rural Special Education Quarterly* and *RuraLink*.

YOU ARE INVITED TO JOIN . . .

National Rural and Small Schools Consortium

information • communication • action
enhancing the quality of rural and small schools

Rural and small schools present special challenges and offer special contributions. The National Rural and Small Schools Consortium is an action-oriented group of individuals and agencies working to enhance rural and small school education and to address associated problems. Factors such as scarce resources, small populations, remoteness from professional resources, and small numbers of faculty make it essential to maintain an effective communication network among all those associated with rural and/or small schools.

Rather than draw membership away from any other organization, it is our intent to serve as a facilitating agent among all groups having rural or small school constituents. If you or your organization are in any way concerned with enhancing rural or small school education, we encourage you to join the Consortium in order to ensure your participation in and timely knowledge of developments in this field. Membership categories include teachers, administrators, teacher educators, deans, and teacher education program directors, school board members, state and federal education department staff, health personnel and cooperative extension staff, parents, and representatives of business and industry engaged in school partnerships.

Membership provides . . .

- ***Journal of Rural and Small Schools***, which contains practical, field-oriented articles relevant to small district management and instruction. The journal is published in the Fall, Winter, and Spring of each academic year.
- **Involvement** in action-oriented conferences, such as the "Exposition '86: Innovative Programs, Research, and Technologies in Rural Education" conference to be held October 7-10, 1986. (The Consortium sponsors an annual national conference in October.)
- **Listing** in the National Rural/Small Schools Resource Exchange System, which links members having specific needs with other members having related areas of expertise.
- **Brokerage** for consultant services.
- **Information** about rural and small schools receiving awards for excellence.
- **Mailings** related to current rural and small school issues.
- **Membership** in the National Rural Education Research Consortium (NRERC) is a linkage system for educators interested in quality rural education research. Goals are met by linking individuals with similar research interests and providing data banks of resources such as assistance in statistics, research subject pools, and facilitation of presentation of research findings at national conferences.
- **Access** to the Rural/Small Schools Electronic Bulletin Board, which allows members to instantly send and receive messages such as resource listings, conferences, federal events, publications, and effective strategies of providing services in rural and small schools.
- **Discounts** on rural and small school publications, conferences, and rural jobs services.
- **Access** to other programs and services of the National Rural Development Institute.

For more information concerning Consortium objectives or for a membership application, call or write: National Rural and Small Schools Consortium, Miller Hall 359, Western Washington University, Bellingham, WA 98225; 206/676-3576.